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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR 1996

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Energy and Water Development Approp...

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BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS
HOUSE OF REPRESENTATIVES

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1995

ONE HUNDRED FOURTH CONGRESS

FIRST SESSION

SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT

JOHN T. MYERS, Indiana, *Chairman*

HAROLD ROGERS, Kentucky
JOE KNOLLENBERG, Michigan
FRANK RIGGS, California
RODNEY P. FRELINGHUYSEN, New Jersey
JIM BUNN, Oregon

TOM BEVILL, Alabama
VIC FAZIO, California
JIM CHAPMAN, Texas

NOTE: Under Committee Rules, Mr. Livingston, as Chairman of the Full Committee, and Mr. Obey, as Ranking Minority Member of the Full Committee, are authorized to sit as Members of all Subcommittees.

JAMES D. OGSBURY, BOB SCHMIDT, and JEANNE WILSON, *Staff Assistants*

PART 2

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MAY 24 1995

Printed for the use of the Committee on Appropriations

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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1996

THURSDAY, FEBRUARY 23, 1995.

NORTH CENTRAL DIVISION

WITNESSES

COLONEL RICHARD W. CRAIG, DIVISION COMMANDER
LARRY HIIPAKKA, DIRECTOR, PROGRAMS MANAGEMENT
ROY J. DEDA, ACTING DIRECTOR, CONSTRUCTION/OPERATIONS
BING C. CHIN, CHIEF, PROGRAMS MANAGEMENT DIVISION

Mr. MYERS. The committee will come to order.

Good morning, gentlemen. We are pleased to have the North Central Division back with us again. We are pleased to have you this morning. Your entire statement will be in the record, and you may summarize as you wish.

Colonel CRAIG. Mr. Chairman, Members of the committee, thank you for the opportunity to——

Mr. MYERS. You might as well suspend. Let's get it over with early. I don't think we are going to be that long. I am sorry. The bell ringeth and we have to goeth.

Mr. BEVILL. We enjoyed the visit.

Mr. MYERS. We will stand in recess until we get back from the vote.

[Recess.]

Mr. MYERS. The committee apologizes for the break. We had to go back and do our constitutional responsibilities. So, Colonel, you may proceed.

INTRODUCTION

Colonel CRAIG. Mr. Chairman, Members of the committee, thank you for the opportunity to again appear before this subcommittee concerning the work of the North Central Division. With me from the division headquarters are Mr. Larry Hiipakka, Director of Programs Management; Mr. Bing Chin, his assistant; and Mr. Roy Deda, Acting Director of Construction/Operations.

SCOPE OF BRIEFING

This morning my status report will include the division's region of responsibility, an overview of our Fiscal Year 1996 budget request, a review of program execution, and the status of several of NCD's studies and projects.

AREA OF RESPONSIBILITY

The North Central Division serves all or parts of 12 States, with a population of 51 million, encompassing 87 congressional districts. Last year 200 million tons of commodities were shipped through

Corps-operated lock facilities on the Mississippi, Illinois, and the Great Lakes navigation systems.

This slide indicates the boundaries of our five engineer districts located in Buffalo, Detroit, Chicago, Rock Island, and St. Paul.

BUDGET SUMMARY

Here is a comparison of last year's allocation and the fiscal year 1996 budget request in the three major appropriation categories.

The budget request for fiscal year 1996 totals about $271 million. The budget reflects a decrease of about $43 million from our fiscal year 1995 allocation, which will be offset by carryover funds from prior-year appropriations. I will now briefly address program execution and its influence on the budget request.

PROGRAM EXECUTION

In recent years, North Central Division's execution of its fiscal program was severely impacted due to the diversion of FTE resources during the "Great Flood of 1993" for flood fighting and post-flood recovery. This diversion from programmed work, in addition to optimistic project schedules, resulted in expenditure of only 75 percent of available funds. Therefore, we have a substantial reserve of carryover funds that will take several fiscal years to fully expend.

As a result, our fiscal year 1996 budget request has been reduced to reflect utilizing carryover funds from fiscal year 1995 and includes revised schedules with reduced budgetary requirements that are, in our opinion, now realistic and achievable. In some cases, there will be slippages in completions from prior testimony, but we are achieving shorter time frames for completions than we experienced prior to the Water Resource Development Act of 1986.

In the event we make greater progress than scheduled on studies and projects in fiscal year 1996, we have assurance from the headquarters of the Chief of Engineers that funds will be reprogrammed to cover obligations.

Our fiscal year 1996 budget request is realistic, and reflects the ability of our local sponsors to provide required elements of local cooperation as well as our own ability to provide planning, engineering, design and construction services.

Let me now give you a more detailed review of several of our studies and projects in the President's budget.

GENERAL INVESTIGATION

The General Investigations request provides $8 million to initiate one study, continue 13 studies, and continue one preconstruction engineering and design project.

UPPER MISSISSIPPI AND ILLINOIS NAVIGATION STUDY

Work will continue on the Upper Mississippi and Illinois navigation study. The Upper Mississippi River and Illinois waterway system is recognized as both a nationally significant commercial navigation system and nationally significant ecosystem.

Traffic in parts of the current navigation system is approaching capacity. At certain locks there are major backups, safety problems, and potential environmental damage when tows must delay and maintain position while awaiting passage. The feasibility study initiated in fiscal year 1993 will identify and assess the need for navigation capacity improvements and will include environmental studies to assess impacts to fish and wildlife that may result from capacity expansion. Fiscal year 1996 funds will be used to continue this system-wide feasibility study.

CHICAGO SHORELINE, ILLINOIS

The Chicago Shoreline Project area includes 24 miles of publicly owned shoreline in the City of Chicago. Shown here is Lake Shore Drive inundated during a 1987 storm. Storm damage prevention measures include: replacement of 38,000 feet of step-stone revetment; repair and replacement of concrete cap on sea walls; protection for one of the city's water purification plants; and beach nourishment.

Fiscal year 1996 funds will be used to complete the second design memorandum and to initiate and complete plans and specifications. The project is not authorized for construction.

CONSTRUCTION GENERAL

The construction general request, which totals about $52 million, will be used to initiate one project, complete one project, and continue 14 projects. The budget request, along with $36.8 million of programmed carryover, results in a construction general program of $88.7 million.

MC COOK AND THORNTON RESERVOIRS, ILLINOIS

The McCook and Thornton projects are part of the Chicago Tunnel and Reservoir Plan and include future construction of two reservoirs in existing stone quarries located in McCook and Thornton, Illinois. Fiscal year 1995 carryover funds, $11.5 million, are adequate for scheduled requirements in fiscal year 1996 and will be used to continue engineering and design.

The project area covers 341 square miles in the City of Chicago and 48 adjacent suburbs. An estimated 170,000 structures are subject to basement flooding.

Since last testimony, the local sponsor has decided not to pursue a multi-lobe plan that would have allowed for continuing full quarry operation by the owner. The multi-lobe plan would have provided for increased flood storage capacity over and above the authorized plan, at local expense, as a result of their own efforts some 50 years hence.

The sponsor now prefers what is essentially the single-lobe plan, under which they have resolved to condemn and acquire the main lobe of the quarry, which would result in the loss of significant mining reserves. The sponsor made that decision based upon substantial opposition to their future expansion plan from residents and officials in adjacent communities.

The project cooperation agreement cannot be executed to initiate construction until the Special Reevaluation Report and Environmental Impact Statement are completed and approved. Completion of these documents is being held in abeyance pending sponsor and quarry owner decisions on the physical configuration of the quarry at the time that the sponsor would take possession which are critical to the design and cost estimate.

FORT WAYNE, INDIANA

The Fort Wayne, Indiana project includes construction of 54,000 feet of new or upgraded levee, flood walls, and road closures. Construction is scheduled to begin in September of this year to prevent flooding such as that shown here during the 1982 flood. Fiscal year 1996 funds will be used to continue construction of the lower east segment and to initiate the upper east segment on the St. Joseph River.

WEST DES MOINES, IOWA

The West Des Moines, Iowa project will provide 100-year flood protection for the cities of West Des Moines and Des Moines, along the Raccoon River and Walnut Creek. The protective works include approximately four miles of new or improved levee, two pumping stations, and about 1900 feet of floodwall.

A critical portion of the project will be completed 22 months ahead of schedule in response to local sponsors' desire to provide flood protection as early as possible for the downtown area. Fiscal year 1996 funds will be used to continue construction.

BURNS HARBOR, INDIANA, MAJOR REHAB

The Burns Harbor, Indiana major rehabilitation project provides for construction of 10 reef segments 75-feet lakeward of the existing rubblemound breakwater shown here, to provide additional protection for vessels moored in the harbor. Construction is scheduled to begin in June 1995. Fiscal year 1996 funds will be used to continue construction.

OPERATION AND MAINTENANCE GENERAL

The Operation and Maintenance request for fiscal year 1996 totals about $211 million. This is a slight increase when compared to the fiscal year 1995 allocation.

The largest activity is navigation, budgeted at about $169 million, which includes maintenance of channels and harbors on the Great Lakes and locks, dams, and canals. This funding will provide for continued maintenance of navigation on inland waterway navigation system and the Great Lakes.

Mr. Chairman and Members of the committee, this concludes the North Central Division status report and we are ready to answer your questions.

[The statement of Colonel Craig follows:]

STATUS REPORT ON CIVIL WORKS ACTIVITIES
IN THE NORTH CENTRAL DIVISION
FISCAL YEAR 1996
COL Richard W. Craig, Division Commander
23 FEBRUARY 1995

Mr. Chairman and members of the Committee, thank you for the opportunity to appear before this subcommittee to present the North Central Division's status report.

AREA OF RESPONSIBILITY

The North Central Division serves water resources needs in all or parts of 12 states, with a population of 51 million, and 1,900 miles of International Border. The region includes 95 percent of the nation's fresh surface water, and about 20 percent of the nation's annual income and production capacity. Last year, 200 million tons of commodities were shipped through Corps operated lock facilities on the Mississippi, Illinois, and the Great Lakes navigation systems.

BUDGET SUMMARY
NORTH CENTRAL DIVISION

	FY 1995 Allocation	FY 1996 Request	Increase or Decrease
General Investigations			
Surveys	$12,322,000	$ 8,028,000	$ - 4,294,000
PED	1,258,000	400,000	- 858,000
Subtotal GI	(13,580,000)	(8,428,000)	(- 5,152,000)
Construction, General			
Construction	46,734,000	38,155,000	- 8,579,000
Major Rehabilitation	40,084,000	8,807,000	-31,277,000
Dam Safety Assurance	7,682,000	4,900,000	- 2,782,000
Subtotal CG	(94,500,000)	(51,862,000)	(-42,638,000)
Operation and Maintenance			
Project Operation	81,910,000	85,022,000	+ 3,112,000
Project Maintenance	124,922,000	126,107,000	+ 1,185,000
Subtotal O&M	(206,832,000)	(211,129,000)	(+ 4,297,000)
GRAND TOTAL, NCD	$314,912,000	$ 271,419,000	$-43,493,000

The budget request for FY 1996 totals $271,419,000. The budget reflects a decrease of $43,493,000 from our FY 1995 allocation, which will be offset by carryover funds from prior year appropriations.

PROGRAM EXECUTION

In recent years, the North Central Division's execution of its' fiscal year program was severely impacted due to diversion of FTE resources during the "Great Flood of 1993" for flood fighting and post flood recovery. This diversion from programmed work, in addition to overly optimistic project schedules, resulted in expenditure of only 75% of available funds. Therefore, we have a substantial reserve of carryover funds that will take several fiscal years to fully expend.

As a result, our FY 1996 budget request has been reduced to reflect utilizing carryover funds from FY 1995 and includes revised schedules with reduced budgetary requirements that are, in our opinion, now realistic and achievable. In some cases, there will be slippages in study/project completions from prior testimony, but we are achieving shorter time frames for completions than we experienced prior to the Water Resource Development Act of 1986. In the event we make greater progress then scheduled on studies and projects in FY 1996, we have assurance from the headquarters of the Chief of Engineers that funds will be reprogrammed to cover obligations.

Our FY 1996 budget request is realistic and reflects the ability of our local sponsors to provide required elements of local cooperation as well as our own ability to provide planning, engineering, design, and construction services.

GENERAL INVESTIGATIONS

The General Investigations request provides $8,428,000 to initiate one study, continue 13 studies, and continue one PED project.

POMME DE TERRE RIVER, MN

This watershed study will investigate the need for improvements such as low flow augmentation, water quality, and fish and wildlife habitat restoration in the Pomme de Terre River basin in west central Minnesota. FY 1996 funds will be used to initiate a reconnaissance report.

DES PLAINES RIVER BASIN, IL

The Des Plaines River, Illinois, has a long history of flooding, which has caused significant economic losses. Sixteen damaging floods have occurred since 1938, including major floods in 1986, 1987, and 1989. The FY 1996 budget request will be used to continue the cost-shared feasibility study which is currently 65 percent complete.

SOUTHEAST CHICAGO, IL

The study area includes 72 square miles in southeast Chicago, Illinois and the southern suburbs. The area is subject to recurrent flooding from the Little Calumet River. The most recent flooding occurred in December 1985, November 1990, and July 1991. The FY 1996 budget request will be used to complete the reconnaissance report which is currently 5 percent complete.

LITTLE CALUMET RIVER BASIN, CALUMET TOWNSHIP, IN

Calumet Township in northwestern Indiana is subject to frequent flooding. The reconnaissance study will be completed in April 1996. The budgeted funds will be used to initiate and complete work on the Project Management Plan and execute a Feasibility Cost Sharing Agreement if there is an interest in flood damage reduction.

LITTLE CALUMET RIVER BASIN, DYER, IN

The town of Dyer in northwestern Indiana is subject to frequent flooding. The reconnaissance study will be completed in June 1995. The FY 1996 budget request assumes there will be a Federal interest in flood damage reduction. The budgeted funds will be used to initiate and complete work on the Project Management Plan and execute a Feasibility Cost Sharing Agreement.

MISSISSIPPI RIVER LEVEES, IA, IL, MO

The study will investigate shoreline erosion along several sections of the Mississippi River mainstem levee system from Guttenburg, Iowa to Hamburg Bay, Illinois. The reconnaissance phase is currently 43 percent complete. FY 1996 funds will be used to initiate the cost-shared feasibility study, if warranted, based on the results of the reconnaissance study.

CROOKSTON, MN

The City of Crookston on the Red Lake River in northwestern Minnesota experiences frequent floods. Temporary emergency levees constructed by the city, together with flood fights, have prevented major damages in the past. However, the existing emergency levee system is in such poor condition that it offers no reliable degree of flood protection. The feasibility phase is currently 50 percent complete. FY 1996 funds will be used to continue the cost-shared feasibility study.

GRAND FORKS, ND

Grand Forks, North Dakota, study is investigating the need for additional flood protection along the Red River of the North. A major flood in 1979 caused $7 million in damages and would have caused an additional $8 million if not for emergency flood fight efforts and temporary levees. The feasibility study is currently 25 percent complete. FY 1996 funds will be used to continue the cost-shared feasibility study.

ONONDAGA LAKE, NY

Onondaga Lake, located at Syracuse, is a part of the New York State Barge Canal and Oswego River Systems. FY 1996 funds will be used to continue the Corps' participation as a member and technical advisor to the Onondaga Lake Management Conference. The purpose of the Conference is to seek remedies to the severe water quality problems of Onondaga Lake.

DEVILS LAKE, ND

Devils Lake is located in north central North Dakota. The lake has no natural outlet and lake levels fluctuate widely. A feasibility study was initiated in October 1993 to consider all problem areas and define a plan to reduce flood damages. The feasibility study is currently 15 percent complete. FY 1996 funds will be used to continue the cost-shared feasibility phase of the study.

FREEPORT, IL

The Freeport, Illinois, project was reauthorized in the Water Resources Development Act of 1990. The study will evaluate structural and non-structural measures to provide flood control at Freeport. The reconnaissance phase will be complete in FY 1995 and the feasibility study will be initiated. FY 1996 funds will be used to continue the cost-shared feasibility study.

WAUKEGAN HARBOR, IL (1970 MOD)

In 1970, the Congress authorized additional deepening in the Federal channel at Waukegan Harbor, Illinois for commercial deep-draft navigation. In recent years, local interests have requested that the authorized deepening be accomplished. The reconnaissance phase was initiated in January 1994 to confirm the economic feasibility of the proposed channel deepening. The reconnaissance phase is currently 85 percent complete. FY 1996 funds will be used to initiate the feasibility study, if warranted, based on the results of the reconnaissance phase.

SNY ISLAND, IL

The study will investigate the need for additional flood protection at the Sny Island Levee District located in Adams, Pike, and Calhoun Counties, Illinois. The Sny Island Levee District sustained substantial damages as the result of the "Great Flood of 1993" along the Mississippi River. Approximately $5,230,000 was spent on emergency operations to repair damaged portions of the existing 50 year levee. A reconnaissance report was initiated this year in response to Congressional direction. The report will determine the economic, engineering, and environmental feasibility of a higher level of protection. FY 1996 funds will be used to complete the reconnaissance report.

UPPER MISSISSIPPI AND ILLINOIS NAVIGATION STUDY

The Upper Mississippi River and Illinois Waterway System is recognized as both a nationally significant commercial navigation system and nationally significant ecosystem. Traffic in parts of the current navigation system is approaching capacity. At certain locks there are major back-ups, safety problems, and potential environmental damage when tows must delay and maintain position while awaiting passage. The feasibility study, initiated in FY 1993, will identify and assess the need for navigation capacity improvements and conduct environmental studies to assess impacts to fish and wildlife that may result from capacity expansion. FY 1996 funds will be used to continue this system-wide feasibility study.

CHICAGO SHORELINE, IL

The project area includes 24 miles of publicly owned shoreline in the City of Chicago, Illinois. Shore protection measures included in the Federal plan include 38,000 feet of rubblemound revetments in the Lincoln Park, Burnham Park, and Meigs Field/Adler Planetarium areas; a floodwall with flashboards in the Oak Street Beach area; a breakwater to protect the South Purification Plant; and beach nourishment near Fullerton Avenue and 31st Street. Flood damages prevented on an annual basis are expected to exceed $61 million. FY 1996 funds will be used to complete the second Design Memorandum (Meigs Field and Adler Planetarium) and to initiate and complete plans and specifications. The project is not authorized for construction. PED is currently 35 percent complete.

CONSTRUCTION GENERAL

The Construction General budget request for FY 1996 totals $ 51,862,000 to initiate one project - Lock 14 (Major Rehab), complete one project - Four Locks Illinois Waterway (Major Rehab), and continue 14 projects. This figure includes funding from the Inland Waterway Trust Fund ($1,977,000). The budget request, together with $36,776,000 of programmed carryover from FY 1995, result in a Construction General program of $88,638,000 for FY 1996.

UPPER MISSISSIPPI RIVER SYSTEM ENVIRONMENTAL MANAGEMENT PROGRAM

Through the Upper Mississippi River System Environmental Management Program (EMP), we are rehabilitating and enhancing fish and wildlife habitat and implementing long-term resource monitoring on the Upper Mississippi and the Illinois Rivers. Seventeen EMP habitat projects are essentially complete. Ten projects are currently under construction. Twenty additional projects are currently under design. The overall project is 40 percent complete. FY 1995 carryover funds, $2,577,000, and the FY 1996 budget request, $19,455,000, will be used to continue or initiate construction of 12 projects, complete construction of five projects, and continue design on 17 projects.

PRESQUE ISLE PENINSULA, PA

Construction of the Presque Isle Peninsula project at Erie, Pennsylvania, was completed in November 1992. It consists of a system of 55 rubblemound breakwaters located offshore along the length of Presque Isle Peninsula and placement of approximately one-half million tons of beach sand fill. The project includes a periodic nourishment program for 50 years. FY 1996 funds will be used to place the fourth year of post construction beach nourishment.

LOVES PARK, IL

The Loves Park, Illinois, project will provide 100-year flood protection for a highly urbanized portion of the city along Loves Park Creek. The protective works include 17,900 lineal feet of improved channel, 3 detention lakes, and a pump station. The project is currently 19 percent complete. FY 1995 carryover funds, $4,810,000, and the FY 1996 budget request, $750,000, will be used to continue construction from North 2nd Street to Walker Avenue and from Walker Avenue to Material Avenue.

MCCOOK AND THORNTON RESERVOIRS, IL

The McCook and Thornton projects are part of the Chicago Tunnel and Reservoir Plan and include future construction of two reservoirs in existing stone quarries located in McCook and Thornton, Illinois. FY 1995 carryover funds, $11,478,000, are adequate for scheduled requirements in FY 1996 and will be used to continue engineering and design. The project area covers 341 square miles in the City of Chicago and 48 adjacent suburbs. An estimated 170,000 structures are subject to basement flooding.

Since last testimony, the local sponsor has decided not to pursue a multi-lobe plan that would have allowed for continuing full quarry operation by the owner. The multi-lobe plan would have provided for increased flood storage capacity over and above the authorized plan, at local expense, as a result of their own efforts some 50 years hence. The sponsor now prefers what is essentially the single lobe plan, under which they have resolved to condemn and acquire the main lobe of the quarry, which would result in the loss of significant mining reserves. The sponsor made that decision based upon substantial opposition to their future expansion plan from residents and officials in adjacent communities.

The PCA cannot be executed to initiate construction until the Special Reevaluation Report and Environmental Impact Statement are completed and approved. Completion of these documents is being held in abeyance pending sponsor and quarry owner decisions on the physical configuration of the quarry at the time that the sponsor would take possession which are critical to the design and cost estimate.

FORT WAYNE METROPOLITAN AREA, IN

The Fort Wayne, Indiana, project includes construction of 54,000 feet of new or upgraded levee, floodwalls, and road closures. Construction is scheduled to begin in September of this year. Flood damages prevented on an annual basis are expected to exceed $8 million. FY 1996 funds will be used to continue construction of the Lower East Segment and to initiate the Upper East Segment on the Maumee River.

LITTLE CALUMET RIVER, IN

Construction of the Little Calumet River flood control project will provide flood protection to about 9,000 residential structures in Gary, Griffith, Hammond, Highland, and Munster, Indiana. Construction is currently 16 percent complete. FY 1995 carryover, $6,900,000, and the FY 1996 budget request, $5,000,000, will be used to initiate construction of the Cline Avenue to Burr Street levee in the east reach and the Kennedy to Cline levee in the west reach; continue construction of the Grant to Georgia, Burr to Chase, Broadway to King levees, and recreation features in the East Reach.

MUSCATINE ISLAND, IA

The Muscatine Island, Iowa, project provides for increasing the level of flood protection for the Muscatine Island Levee District, the City of Muscatine, and the Muscatine-Louisa County Drainage District No.13 to a 200 year level of protection. FY 1996 funds will be used to initiate physical construction of the project.

WEST DES MOINES, IA

The West Des Moines, Iowa, project will provide 100-year flood protection for approximately 900 urban acres of the Cities of West Des Moines and Des Moines, along the Raccoon River and Walnut Creek. The protective works include approximately 4 miles of new or improved levee, 1,850 feet of floodwall, 2 pumping stations, and recreational facilities. FY 1995 carryover, $1,166,000, and the FY 1996 budget request, $4,040,000, will be used to continue construction of the Raccoon River levee and the Walnut Creek levee. Construction of the Lower Walnut Creek levee will be completed 22 months ahead of schedule in response to the local sponsors desire to provide flood protection as early as possible for the downtown area. The project is currently 25 percent complete.

CHASKA, MN

Construction is continuing on the Chaska, Minnesota, flood control project. The project consists of a levee and interior drainage works along the Minnesota River, flood diversion channels on Chaska Creek and East Creek, and appropriate floodplain regulation measures. The project is currently 69 percent complete. FY 1996 funds will be used to continue construction of the East Creek diversion channel. Construction completion is scheduled for December 1996.

SHEYENNE RIVER, ND

Work is continuing on the Sheyenne River, North Dakota, flood control project. The FY 1996 funds will be used to continue planning, engineering, and design to provide for a five foot pool raise at the Baldhill Dam needed to provide an additional measure of flood protection downstream. The project is currently 64 percent complete.

SOURIS RIVER, ND

The project will provide flood control measures to protect urban and rural residents located along the Souris River in North Dakota. FY 1995 carryover funds, $2,800,000, funds will be adequate to continue work on the Souris River channel modifications and the Lake Darling Dam modifications. The overall project is currently 88 percent complete. Construction completion is scheduled for October 1997.

DAM SAFETY

HOMME LAKE (DAM SAFETY), ND

The Homme Lake, North Dakota, project provides for modifications of the dam spillway which has been identified as having inadequate capacity. The spillway would be overtopped by approximately 2.3 feet during the probable maximum flood which would cause substantial damage and threaten potential loss of life downstream. FY 1996 funds will be used to continue planning, engineering, and design.

LAKE ASHTABULA AND BALDHILL DAM (DAM SAFETY), ND

The Lake Ashtabula-Baldhill Dam, North Dakota, dam safety assurance project includes construction of a new, ungated auxiliary spillway and rehabilitation of the existing spillway. The new, ungated spillway will be constructed under the dam safety program and the repair of the existing spillway will be accomplished under both Dam Safety and Major Rehabilitation authorities. FY 1995 carryover, $3,900,000, and the FY 1996 budget request, $4,700,000, will be used to continue construction of the spillway. The project is currently 22 percent complete.

MAJOR REHABILITATION

FOUR LOCKS ILLINOIS WATERWAY, IL (MAJOR REHAB)

The Illinois Waterway Major Rehabilitation project will involve replacing the lower miter gates and making sill modifications at Brandon Road, Dresden Island, and Marseilles Locks, and resurfacing the lock walls at Lockport Lock. FY 1995 carryover, $3,136,000, and the FY 1996 budget request, $3,254,000, will be used to complete construction of the Lower Miter Gate Modifications and the Lockport Lockwall resurfacing. The project is currently 33 percent complete. The bulk of the construction effort is to be accomplished during the lock closure scheduled for 11 July 95 through 8 September 95. Construction completion is scheduled for June 1996.

BURNS HARBOR, IN (MAJOR REHAB)

The Burns Harbor, Indiana, Major Rehabilitation project provides for construction of ten reef segments 75 feet lakeward of the existing rubblemound breakwater to provide additional protection for vessels in this international harbor. Construction is scheduled to begin in June 1995. FY 1996 funds will be used to continue construction.

LOCK 14, IA (MAJOR REHAB)

The Mississippi River, Lock 14 Major Rehabilitation project provides for resurfacing the lock chamber and dam piers, replacement of the operating machinery and electrical system, installation of a bubbler system in one lock chamber, and replacement of the roller and tainter gate chain hoisting equipment. Last year 22 million tons of commodities transitted Lock 14. FY 1996 funds will be used to initiate construction of the project.

LAKE ASHTABULA AND BALDHILL DAM, ND (MAJOR REHAB)

Repair of the existing spillway Baldhill Dam, North Dakota, is being accomplished under the Dam Safety and Major Rehabilitation authorities. FY 1996 funds will be used to continue work on the spillway contract. This project is currently 30 percent complete.

OPERATION AND MAINTENANCE GENERAL

	FY 1995 ALLOCATION	FY 1996 REQUEST	INCREASE/ DECREASE
1. NAVIGATION	$168,522,000	$168,707,000	$ +185,000
2. FLOOD CONTROL	$18,018,000	$22,810,000	$+4,792,000
3. MULTIPLE PURPOSE PROJECT INCLUDING POWER	$15,727,000	$14,962,000	$ -765,000
4. PROTECTION OF NAVIGATION	$4,565,000	$4,650,000	$ +85,000
TOTAL	$206,832,000	$211,129,000	$+4,297,000

The Operation and Maintenance request for FY 1996 totals $211.1 million. This is a slight increase when compared to the FY 1995 allocation. The largest activity is navigation budgeted at $168.7 million which includes $65.1 million for maintenance of channels and harbors and $103.6 million for locks, dams, and canals. This funding will provide for continued navigation on the Inland Waterway Navigation System and the Great Lakes. The increase in the FY 1996 request is in flood control and is for dam safety spillway repairs at Orwell Lake, Minnesota.

Several Operation and Maintenance projects are of particular interest.

ASHTABULA HARBOR, OH

The FY 1996 budget request supports normal operation and maintenance at Ashtabula Harbor, Ohio. Further work on a Confined Disposal Facility (CDF) to contain 2.6 million cubic yards of polluted dredged material that no longer meets criteria for open lake disposal is on hold pending resolution of the administration policy for cost sharing responsibilities for CDFs. We are participating in the Ashtabula River Partnership with the U.S. Environmental Protection Agency, the State of Ohio, local interests and private industry. This is a partnership formulated to address overall cleanup efforts in the Ashtabula area.

CLEVELAND HARBOR, OH

Cleveland Harbor has the most linear feet of breakwater on Lake Erie and requires the confinement of an average of 250,000 cubic yards annually of dredged material from the Cuyahoga River and associated channels. Detailed design of a new Confined Disposal Facility (CDF) at Cleveland Harbor is underway. Construction of this facility is to be sited adjacent to the Burke Commuter Airport located on a previously filled CDF and is scheduled to begin in 1996 with completion in 1999. Due to delay caused by complicated design and coordination requirements, the currently active CDF will be modified to increase its capacity to accommodate dredged material until the new CDF is completed.

INDIANA HARBOR, IN

The FY 1996 budget request supports detailed design of an initial Confined Disposal Facility (CDF) at Indiana Harbor, Indiana, to contain 4.67 million cubic yards of dredged material which is unsuitable for open lake disposal. An acceptable upland CDF site has been located. A draft Comprehensive Management Plan (CMP) is scheduled to be completed by the end of April 1995. The final CMP is scheduled to be completed in August 1995. Costs for construction of the CDF will be shared between both Federal and non-Federal sources.

TOLEDO HARBOR, OH

Annually 16 million tons of cargo pass through Toledo Harbor, Ohio. We dredge 900 thousand cubic yards of material a year, a portion of which must be confined due to its highly polluted composition. The FY 1996 budget request supports ongoing dredging of the harbor. In addition, we are presently involved in a coordinated effort with other state and Federal agencies in developing a long-term dredged material management plan for the harbor. This plan will address the long-term dredged material management and disposal decisions needed in order to assure navigation depths are maintained and local environmental concerns are met.

Mr. Chairman and members of the Committee, this concludes the North Central Division status report.

[CLERK'S NOTE.—The justification sheets for the North Central Division follow:]

Justification of Estimate for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

SUMMARY, NORTH CENTRAL DIVISION

	FY 1995 Allocation	FY 1996 Request	Increase or Decrease
General Investigations			
Surveys	$12,322,000	$ 8,028,000	$ - 4,294,000
Preconstruction Engineering and Design	1,258,000	400,000	- 858,000
Subtotal General Investigation	(13,580,000)	(8,428,000)	(- 5,152,000)
Construction, General			
Construction	46,734,000	38,155,000	- 8,579,000
Major Rehabilitation	40,084,000 1/	8,807,000 2/	-31,277,000
Dam Safety Assurance	7,682,000	4,900,000	- 2,782,000
Subtotal Construction, General	(94,500,000)	(51,862,000)	(-42,638,000)
Operation and Maintenance			
Project Operation	81,910,000	85,022,000	+ 3,112,000
Project Maintenance	124,922,000	126,107,000	+ 1,185,000
Subtotal Operation and Maintenance	(206,832,000)	(211,129,000)	(+ 4,297,000)
GRAND TOTAL, NORTH CENTRAL DIVISION	$314,912,000	$ 271,419,000 3/	$-43,493,000

1/ Includes an estimated $17,504,000 to be derived from the Inland Waterways Trust Fund in FY 95.
2/ Includes an estimated $1,977,000 to be derived from the Inland Waterways Trust Fund in FY 96.
3/ Excludes $36,776,000 in unobligated carryover from prior years that is programmed for use in FY 96.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
I. SURVEYS - NEW					
a. Navigation Studies - None					
b. Flood Damage Prevention Studies - None					
c. Shoreline Protection Studies - None					
d. Special Studies					
MINNESOTA					
Pomme de Terre River, MN (Minnesota River Basin)	250,000	0	0	75,000	175,000

The Pomme de Terre River is a 966 square mile drainage area and is a tributary of the Minnesota River. It is located in west central Minnesota in Grant, Steven, and Swift Counties. Local interests and the Minnesota Department of Natural Resources (MDNR) have requested and indicate strong support for a Corps of Engineers study of water resources problems, needs and opportunities in the watershed. The MDNR sent a request letter, dated April 30, 1990, to their U.S. House Representative concerning this study and three others in the Minnesota River Basin. The MDNR, affirmed its strong support for this study in a letter dated April 27, 1993 and continued support has been confirmed orally in June 1993. The MDNR has indicated that it is the most likely non-Federal sponsor. Natural resource management outputs associated with this watershed project include urban and agricultural flood damage reduction at various locations in the proposed study area, low flow augmentation, and fish and wildlife habitat restoration and water quality improvements to support that habitat. Methods to be evaluated include wetland restoration associated with guiding environmentally sensitive development within the watershed. The watershed study would provide a basis on which the Corps would issue general permits that would minimize or avoid any impacts in wetland areas while, at the same time, making the approval of minor activities easier for the public. Restoration of degraded wetlands as mitigation for permitted activities could be managed better. The Corps currently has a substantial level of permit activity in the watershed (50 permit activities per year) and the number of activities will increase as a result of implementation of the Corps new excavation regulation. In 1988, during a prolonged drought, significant portions of the Pomme de Terre River stopped flowing or became dry. This condition caused significant fish and wildlife damages, impacted recreation, and is of ongoing major local and State interest. The proposed study is multiple purpose and could integrate Federal, State and local efforts regarding urban flood damage reduction and other important outputs including water quality, low flow augmentation, environmental restoration, and agricultural flood control. In July 1993, an approximate 9.5-foot stage increase from normal, caused modest flood conditions at Appleton, Minnesota. Significant damages associated with this flood were prevented as a result of major floodfighting efforts and sandbagging dike construction to a 5-foot height, at a cost of $25,000. The reconnaissance study is scheduled to be completed in June 1997, which is 12 months after initiating the study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

North Central Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
II. SURVEYS - CONTINUING					
a. Navigation Studies - None					
b. Flood Damage Prevention Studies					
ILLINOIS					
Des Plaines River, IL	1,825,000	1,423,000	40,000	362,000	0

The Des Plaines River Basin, located in Lake and Cook Counties in northeastern Illinois, has a drainage area of approximately 500 square miles. Much of the study area is becoming urbanized; however, portions of the basin are being kept as undeveloped open lands for recreation and for forest preserve. The purpose of the study is to investigate the flooding problems in the basin and develop the most economically feasible flood damage reduction measure. The Des Plaines River has a long history of flooding which has caused significant economic losses. Sixteen damaging floods have occurred since 1938, including the floods of 1986, 1987, and 1989. The September 1986 flood caused an estimated $35 million in damage to 10,000 dwellings and 263 business and industrial sites. Over 15,000 residents were evacuated from the flooded area. Damage estimates for the August 1987 flood were in excess of $50 million within the study area. Flooding in the basin is due to the inadequate capacity of the existing channels to carry peak flows during major storm events. Potential solutions to this problem include multiple reservoirs, check dams with on-line floodwater storage, and nonstructural measures.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study. The funds requested for Fiscal Year 1996 would be used to complete the feasibility study. The estimated cost of the feasibility phase is $2,390,000, which is being shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. The Feasibility Cost Sharing Agreement was signed with the State of Illinois on 20 April 1990. The Metropolitan Water Reclamation District of Greater Chicago and the Lake County, Illinois Stormwater Management Committee have agreed to furnish a portion of the required local funding to the State for the feasibility phase. A summary of study cost sharing requirements is as follows:

Total estimated study costs	$3,020,000
Reconnaissance Phase (Federal)	630,000
Feasibility Phase (Federal)	1,195,000
Feasibility Phase (non-Federal)	1,195,000

The reconnaissance phase was completed in April 1990. The feasibility phase of study is scheduled for completion in April 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Southeast Chicago, IL	1,185,000	28,000	150,000	200,000	807,000

The study area covers approximately 72 square miles and includes Southeast Chicago and the southern suburban communities of Burnham, Calumet City, Dolton, Markham and South Holland. The study area is completely urbanized and encompasses 38,200 households with 101,000 residents. Over 3,000 homes and 100 business establishments lie within the 100-year flood plains of the Cal-Sag Channel, Grand Calumet, and Little Calumet River Basins. These residential and commercial structures have repeatedly suffered significant damages from flooding on one or more of the rivers. In addition, the study area lies within a major transportation corridor and the highways, arterial, and feeders, cross the watercourses at several locations. Over 350,000 vehicle trips a day have been recorded. In excess of 100,000 truck trips and 175,000 work related trips either originate in or traverse the study area. The flooding from the area rivers has blocked several crossings for up to 48 hours resulting in traffic rerouting, attendant congestion, access problems, and increased travel times. Three major floods have occurred on the Little Calumet River in the study area in recent years. The most severe flood occurred in November 1990. It caused an estimated $9.7 million in damages of which $1.5 million was attributed to transportation blockages, delays, and repairs. Over 1,200 structures, including 20 businesses, experienced flood damages estimated at $7.2 million. Flooding also occurred in December 1985 and July 1991. Estimated average annual damages exceed $4.5 million. The study would consider a full range of flood mitigation alternatives, including selective levee placements, to identify the most efficient plan. During discussions with the City of Chicago, support for this study was expressed.

Fiscal Year 1995 funds are being used to continue the reconnaissance phase at full Federal expense. The funds requested for Fiscal Year 1996 will be used to continue the reconnaissance phase. The preliminary estimated cost of the feasibility phase is $1,490,000, which is to be cost shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$ 1,930,000
Reconnaissance Phase (Federal)	440,000
Feasibility Phase (Federal)	745,000
Feasibility Phase (Non-Federal)	745,000

The reconnaissance phase is scheduled for completion in February 1997. A completion date is being determined for this feasibility study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Central Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
INDIANA					
Little Calumet River Basin, Calumet Township, IN	745,000	0	45,000	100,000	600,000

Cady Marsh Ditch, a major tributary of the Little Calumet River, is about six miles long and drains about 17 square miles. This watercourse originates in a rural area, but flows through a very flat, primarily urban area which includes Highland, Griffith, and Calumet Township, Indiana. Calumet Township lies immediately east of Griffith and is subject to overbank flooding from the stream. When floods occur, residences incur damages and travel on main transportation routes is disrupted. More than 170 homes are estimated to be in the 100-year flood plain, with a total amount of property at risk considered to be in excess of $6,000,000. Congressman Visclosky has repeatedly expressed his desire to alleviate flood problems in this area. Potential solutions include levees, channel improvements, and an off-channel excavated reservoir.

FY 1995 funds are being used to initiate the reconnaissance phase at full Federal expense. The funds requested for Fiscal Year 1996 will be used to continue the reconnaissance phase. The preliminary estimated cost of the feasibility study is $990,000, which is to be cost shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$1,240,000
Reconnaissance Phase (Federal)	250,000
Feasibility Phase (Federal)	495,000
Feasibility Phase (Non-Federal)	495,000

The reconnaissance phase is scheduled for completion in February 1997. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Little Calumet River Basin, Dyer, IN	700,000	118,000	102,000	60,000	420,000

The town of Dyer, Indiana, is located in northwestern Indiana in the Little Calumet River watershed. It is near the Illinois-Indiana State line, about eight miles south of Lake Michigan. Both Hart Ditch and Dyer Ditch contribute to the flood problems in the community. Hart Ditch is a major tributary of the Little Calumet River, while Dyer Ditch, a tributary of Hart Ditch, drains farm land east of Dyer before flowing through the town of Dyer. Pheasant Hills Pond, a moderately large pond, is located near the center of Dyer. Frequent flooding on these water bodies causes damage in primarily residential areas. Floods occurred in the 1970's and the 1980's with occasions where floodwater remained for as long as four to five days, requiring the evacuation of residents. Several floods occurred in 1989 and in 1990 (Nov-Dec). In 1990, more than 100 residences and the town hall reported flooding, and in excess of $30,000 in emergency costs were incurred. It is estimated that the 100-year flood plain includes more than 570 structures valued at more than $50,000,000. Flooding in this area also impacts the EJ&E Railroad and U S Highway 30. Potential solutions to be investigated include levees, channel improvements, and an off-channel excavated reservoir. The town of Dyer and Congressional interests have expressed concern over the necessity for flood protection measures in this area.

FY 1995 funds are being used to continue the reconnaissance phase at full Federal expense. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase. The preliminary estimated cost of the feasibility study is $840,000, which is to be cost shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$1,120,000
Reconnaissance Phase (Federal)	280,000
Feasibility Phase (Federal)	420,000
Feasibility Phase (Non-Federal)	420,000

The reconnaissance phase is scheduled for completion in March 1996. A completion date is being determined for this feasibility study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Central Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
IOWA					
Mississippi River Levees, IA, IL, and MO	685,000	102,000	168,000	50,000	365,000

The study will address streambank protection and related water resource purposes on the Mississippi River with particular emphasis on: Sny Island Levee Drainage District, Bay Island Levee Drainage District No. 1, Indian Grave Drainage District, and Lima Lake Drainage District, Illinois; Iowa River - Flint Creek Levee District No. 16 and Muscatine Island Levee District, Iowa; and South River Drainage District and Gregory Drainage District, Missouri. The study area encompasses the Upper Mississippi River between Guttenburg, Iowa (R.M. 614.0) and Hamburg Bay, Illinois (R.M. 261.0). Within the study boundaries, foreshore erosion has progressed close to mainstem levees along the Mississippi River, thereby threatening the integrity of the levee systems and creating a potential for catastrophic flooding of commercial, industrial, agricultural, residential, and public property. These levee systems protect several communities, including Hull and Meyer, Illinois, and Muscatine and Oakville, Iowa, and approximately 270,000 acres of prime agricultural lands. Failure of these levees due to erosion during a flood near design levels would create a threat to life and result in an estimated $525 million in damages. In the 1960s and 1970s, these levee systems were strengthened and increased in height to withstand at minimum 50-year frequency floods on the Mississippi River. It is estimated that more than $676 million in flood damages have been prevented by the levees in the affected drainage districts along the Mississippi River.

Fiscal Year 1995 funds will be used to complete the reconnaissance phase at full Federal expense. If the reconnaissance report is certified to be in accord with existing policy, the funds requested for Fiscal Year 1996 will be used to initiate the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $830,000 which is to be shared on a 50-50 percent basis by the Federal and non Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of the study cost-sharing is as follows:

Total Estimated Study Cost	$1,100,000
Reconnaissance Phase (Federal)	270,000
Feasibility Phase (Federal)	415,000
Feasibility Phase (non-Federal)	415,000

The reconnaissance phase is scheduled for completion in September 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
MINNESOTA					
Crookston, MN	995,000	665,000	143,000	150,000	37,000

Crookston is located on the Red Lake River in northwestern Minnesota, about 15 miles east of the Minnesota - North Dakota border and about 85 miles south of the Canadian border. The principal water resource problems in the study area are flooding, riverbank instability, and erosion. The average annual flood damages at Crookston are estimated at about $1,084,000, most of which are attributable to about 800 residences that are located in the floodplain. The flood of 1950 inundated most of the flood-prone properties. However, for subsequent floods, even though larger than the 1950 event, the city had erected temporary levees that, together with flood fights, have prevented major damage to residential areas. These levees were not constructed to permanent levee criteria and have deteriorated. The potential for significant flood levels existed at Crookston in 1989. Warm weather started to melt the heavy snowpack and major ice jams formed on the river. However, a cold spell during the melting period helped moderate flood levels and little damage occurred. The local residents are concerned that the deterioration of their temporary levee system creates a high risk for widespread damages to the residences in the flood-prone areas of Crookston with a recurrence of the 1969 or the 1979 floods. The flood-prone areas of the city are located in several separable reaches, some containing large numbers of residences while others contain only a few. The feasibility of each reach will be investigated. The Feasibility Cost Sharing Agreement with the city of Crookston was executed 19 October 1992.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study. The funds requested for Fiscal Year 1996 would be used to continue the feasibility phase of the study. The estimated cost of the feasibility phase is $1,174,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing follows:

Total Estimated Study Cost	$1,582,000
Reconnaissance Phase (Federal)	408,000
Feasibility Phase (Federal)	587,000
Feasibility Phase (Non-Federal)	587,000

The reconnaissance phase was completed in October 1992. The feasibility study is scheduled for completion in January 1997.

North Central Division

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NORTH DAKOTA					
Grand Forks, ND	1,560,000	736,000	236,000	225,000	363,000

Grand Forks, with a population in 1990 of 49,425, is located on the Red River of the North, about 70 miles south of the Canadian Border, across the river from East Grand Forks, Minnesota. Since 1950, nine floods have threatened the city, the most recent occurring in 1993. The permanent project in one short reach plus flood fight efforts in other areas of the city have prevented significant damages. The flood of 1979 was the largest flood experienced at Grand Forks since 1897. Only through a major emergency flood fight effort were the residents able to prevent a catastrophe. Although $8,000,000 in damages were prevented, more than $7,000,000 in damages were sustained. The permanent levee project in one area of Grand Forks has prevented over $10,000,000 in flood damages since it was constructed, and two reaches of emergency levees have been instrumental in the successful flood fights waged since 1966. However, these projects do not provide any assured substantial degree of protection. The entire city is subject to inundation by the standard project flood and the potential for catastrophic flood damages is ever present. Continued reliance by local interests on some of the emergency levees provides a false sense of security, especially in light of the unstable soil conditions which exist in the area. In October 1985, the city of Grand Forks requested assistance in developing a flood protection project. The Feasibility Cost Sharing Agreement with the city of Grand Forks was executed 29 December 1993. Because it is one of the largest population centers in North Dakota, flooding at Grand Forks adversely affects the surrounding region.

Fiscal Year 1995 funds will be used to initiate the feasibility phase. The funds requested for Fiscal Year 1996 would be used to continue the feasibility phase. The estimated cost of the feasibility phase is $2,200,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,660,000
Reconnaissance Phase (Federal)	460,000
Feasibility Phase (Federal)	1,100,000
Feasibility Phase (Non-Federal)	1,100,000

The reconnaissance phase was completed in December 1993. The feasibility study is scheduled for completion in September 1997.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
c. Shoreline Protection Studies - None					
d. Special Studies					
NEW YORK					
Onondaga Lake, NY SEC 401- P.L. 101-596	650,000	379,000	81,000	95,000	95,000

Onondaga Lake, which is a part of the New York State Barge Canal System and Oswego River System, has a total drainage area of 245 square miles and a surface area of 4.6 square miles. The city of Syracuse is located along the south shore of the lake. Major tributary streams to the lake are Ninemile Creek and Onondaga Creek. The lake empties into the Seneca River, also a part of the Erie Barge Canal. The major water resource problem associated with the lake is its degraded water quality. Currently, there is a ban on swimming and on the consumption of fish caught in the lake. There are some warm water species of fish, but the cold water species have disappeared, largely because of the degraded water quality. The poor quality deters optimal use of the lake's recreation potential, adversely affects fish and wildlife resources, stymies the potential for redevelopment and economic growth of the surrounding area, and impacts on the water quality of the Erie Canal. The Onondaga Lake Management Conference was established to develop a Management Plan which identified the causes of poor lake water quality and investigate alternatives to reducing or eliminating the causes. The Conference was also charged with overseeing the implementation of the Management Plan.

Under the Section 401 of PL 101-596 authority, Fiscal Year 1995 funds are being used to participate in the Onondaga Lake Management Conference. The funds requested for Fiscal Year 1996 will be used to participate in the Management Conference activities, including attending conference, committee, and working group meetings.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Central Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NORTH DAKOTA					
Devils Lake, ND	1,859,000	849,000	0	125,000	885,000

Devils Lake is located in north central North Dakota and has no natural outlet except at extremely high lake levels. Devils Lake levels have fluctuated widely in the past, in response to multi-year wet and drought periods. According to accounts of early settlement in the basin, the elevation of Devils Lake was about 1446 feet in 1830, about 16 feet higher than the most recent high lake levels. In June 1994, lake levels reached an elevation of 1430.5 feet above mean sea level, the result of a multi-year wet period. In 1940, following many years of drought, Devils Lake was almost dry when the level dropped to near 1400 feet, the lowest level in recorded history. This drought has an estimated recurrence interval of approximately 400 to 600 years. Communities located on the lake include the city of Devils Lake (1990 population 7,782), the Fort Totten Indian Reservation, and the village of Minnewaukan. Camp Grafton, a National Guard training facility, is also located on the lakeshore. Problems include potential urban, lakeshore, and transportation flood damages, municipal, industrial, and agricultural water supply shortages, deteriorating water quality, reduced opportunities for recreation, reduced income for recreation dependent industries, and fish and wildlife conservation and enhancement losses. The study would be a basin water management analysis of all problem areas and would include defining a stabilization plan for Devils Lake to include providing an inlet and outlet at Devils Lake. The Feasibility Cost Sharing Agreement was executed with the North Dakota State Water Commission on 8 October 1993.

If the first phase of the feasibility study determines there is a project that is in accord with existing policy, Fiscal Year 1994 carrover funds are being used in Fiscal Year 1995 to initiate the second phase of the feasibility study. The funds requested for Fiscal Year 1996 would be used to continue the feasibility phase of the study. The estimated cost of the feasibility phase is $2,620,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing follows:

Total Estimated Study Cost	$3,169,000
Reconnaissance Phase (Federal)	549,000
Feasibility Phase (Federal)	1,310,000
Feasibility Phase (non-Federal)	1,310,000

The reconnaissance phase was completed in October 1993. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
e. Basin Studies - None					
f. Review of Authorized Projects - Deferred Projects					
ILLINOIS					
Freeport, IL	940,000	210,000	130,000	108,000	492,000

Freeport, located in Stephenson County in northwest Illinois, is subject to flooding from the Pecatonica River and two tributaries, Currier Creek, and Yellow Creek. About 260 residences, 50 commercial establishments, public facilities, and 10 industries, including three of Freeport's largest, are subject to flooding. With gage data since 1914, 117 floods have exceeded flood stage of 14 feet. The flood of record occurred in March 1929 when stages reached 19.7 feet and caused $1 million in damage (1994 dollars). More recent flood occurrences and damages experienced (1994 dollars) are: March 1963 ($474,000); July 1969 ($1,212,000); March 1975 ($727,000); and July 1990 ($275,000). Authorization was originally granted by the Flood Control Act of 1936. A GDM for a channel realignment to protect 1,000 acres, including transportation, industrial, commercial, residential, and public facilities, was completed in 1965. In 1973, the local sponsor requested that work be halted, as they were unable to cost-share construction at that time. A severe flood occurred in 1975 and the city requested reactivation of the project. A Phase I GDM, completed in 1979, investigated alternatives to the authorized project. All alternatives were found infeasible. The project was deauthorized by the Water Resources Development Act (WRDA) of 1986 (PL 99-662). Recent flooding of the Pecatonica prompted city officials to strongly support a review of flood damage reduction alternatives. The project was reauthorized in the WRDA of 1990. The city of Freeport, by letter dated 10 August 1993, has expressed strong interest in serving as local sponsor for the study.

Fiscal year 1995 funds are being used to complete the reconnaissance phase and, if the reconnaissance report is certified to be in accord with existing policy, initiate the feasibility phase. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $1,380,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost-sharing is as follows:

Total Estimated Study Cost	$1,630,000
Reconnaissance Phase (Federal)	250,000
Feasibility Phase (Federal)	690,000
Feasibility Phase (non-Federal)	690,000

The reconnaissance phase is scheduled for completion in March 1995. A completion date is being determined for this feasibility study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Central Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Waukegan Harbor, IL	250,000	50,000	40,000	25,000	135,000

Waukegan, Illinois, is on the western shore of Lake Michigan, 16 miles south of Kenosha, Wisconsin, and 38 miles north of Chicago, Illinois. Waukegan Harbor is the only deep-draft commercial harbor between Milwaukee and Chicago capable of handling large shipments of cement, gypsum, and other building materials. It is the nearest deep-draft harbor to the Great Lakes Naval Training Center, located about 3-1/2 miles south of the city. Existing Federal improvements at Waukegan Harbor consist of an approach channel, 22 feet deep, an entrance channel, 18 feet deep, protected by two piers, and an inner basin, 18 feet deep. Average annual waterborne commerce at the harbor during the last 10 years was 350,000 tons. The uncompleted Federal project was authorized in December 1970 under authority of Section 201 of PL 89-298. This work includes deepening the existing entrance channel in the outer harbor from 22 to 25 feet; deepening the channel between piers from 18 to 23 feet; and deepening the inner basin from 18 to 23 feet and extending its limits approximately 275 feet northward. In 1972, the uncompleted work was placed in the inactive category because it appeared to lack economic justification. Preliminary analysis in 1985 indicated, that due to changes in existing conditions at the harbor and its usage, the project had a high potential for economic feasibility. Current project depths are inadequate to accommodate fully loaded vessels (21.5 feet) used by major shippers. The added transportation costs, due to the use of light-loaded vessels, are on-the-order of $1,200 per 1,000 tons. These additional costs could lead to shippers relocating their plant facilities away from the Waukegan area. The Waukegan Port District is the probable local sponsor for the feasibility phase of the study.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase at full Federal expense. If the reconnaissance report is certified to be in accord with policy, FY 1996 funds will be used to initiate the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $320,000, which is to be cost shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$ 410,000
Reconnaissance Phase (Federal)	90,000
Feasibility Phase (Federal)	160,000
Feasibility Phase (Non-Federal)	160,000

The reconnaissance phase is scheduled for completion in June 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
f. Review of Authorized Projects - Completed Projects					
ILLINOIS					
Sny Island ,IL	1,250,000	0	252,000	248,000	750,000

The study will address flood protection and related water resources purposes at Sny Island Levee Drainage District, Illinois. The Sny Island Levee and Drainage District is located along approximately 50 miles of the Mississippi River in Adams, Pike, and Calhoun Counties, Illinois. The upstream end of the District is across the river from Hannibal, Missouri. Sny Island Levee Drainage District is a federally-constructed flood protection project that was completed in 1967. The project was constructed to a 50-year level design standard plus 2 feet of freeboard for more than 110,000 acres of agricultural land, transportation facilities, various businesses, and several rural communities. In addition to 55 miles of mainstem levee, the system contains three leveed diversion channels, three pumping stations, and retarding/desilting reservoirs. During the Great Flood of 1993, an upstream reach of the mainstem levee was overtopped, which resulted in devastating flooding of about 43,000 acres, numerous businesses, highway and rail facilities, and several small communities including Hull and East Hannibal. Flood damage data for the 1993 flood is not available for this area, however, during and after the flood, approximately $5,230,000 was spent on emergency operations to repair the damaged portions of the levee after the flood waters receded.

Fiscal year 1995 funds are being used to initiate the reconnaissance phase. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase of the study. The preliminary estimated cost of the feasibility phase is $1,500,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost-sharing is as follows:

Total Estimated Study Cost	$2,000,000
Reconnaissance Phase (Federal)	500,000
Feasibility Phase (Federal)	750,000
Feasibility Phase (non-Federal)	750,000

The reconnaissance phase is scheduled for completion in July 1996. A completion date is being determined for this feasibility study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 — North Central Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Upper Mississippi & Illinois Navigation Study IL, IA, MN, MO, WI	43,400,000	14,780,000	8,443,000	6,205,000	13,972,000

The Upper Mississippi and Illinois Navigation Study will address the need for navigation capacity expansion on the Upper Mississippi River and the Illinois Waterway. The area includes 854 miles of the Upper Mississippi River, with 29 locks and dams, between Minneapolis-St. Paul and the mouth of the Ohio River, and 348 miles of the Illinois Waterway, with eight locks and dams, that connect the city of Chicago and the Great Lakes with the Mississippi River just upstream of the Melvin Price Locks and Dams. The system's principal problems are: (1) delays to commercial traffic at locks upstream of Melvin Price L&D due to limited lockage capacity and increasing traffic and (2) system congestion resulting in competition and potential conflict between recreational and commercial users. Reconnaissance studies have indicated that improvements to increase the capacity of certain locks on the Mississippi River and Illinois Waterway are economically justified.

Fiscal Year 1995 funds will be used to continue the feasibility phase of the study. The result will be a prioritization of capital investment needs, including timing, for navigation improvements on the Upper Mississippi and Illinois Waterway system for the 50-year planning horizon. Recommendations will address the near-term and long-term needs for navigation capacity. In recognition of the tremendous environmental values of both waterways, the environmental impact statement will encompass system wide and cumulative impacts. The feasibility study report will recommend to Congress the implementation of system investments, including the identification of the costs of mitigation of environmental impacts.

The funds requested for Fiscal Year 1996 would be used to continue the feasibility study.

The reconnaissance phase was completed in April 1993. A completion date is being determined for this feasibility study.

Project	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
III. PRECONSTRUCTION ENGINEERING AND DESIGN - NEW - NONE					
IV. PRECONSTRUCTION ENGINEERING AND DESIGN - CONTINUING					
a. Navigation Projects - None					
b. Shoreline Protection Projects					
ILLINOIS					
Chicago Shoreline, IL	2,000,000	1,041,000	387,000	400,000	172,000

The project area includes all 24 miles of publicly owned shoreline in the City of Chicago. The adjacent land and transportation network are protected by continuous revetments and seawalls. Those constructed of wood pilings and stone cribs (over 8 miles) have begun to fail. As the land behind the structures is lost due to storms, the high capacity road network parallel to the shoreline will be impacted. These roads carry 120,000 vehicles per day. Re-routing this traffic will cause serious disruption and traffic delay damages. In addition, facilities located on public property with a capital investment of several billion dollars, will be destroyed. The Federally plan consists of a total of 38,000 feet of rubblemound revetments in the Lincoln Park and Burnham Park areas. Other project features include: revetments near the Adler Planetarium and at Meigs Field; a low concrete floodwall with detachable flashboards in the Oak Street Beach area; a breakwater to protect the South Purification Plant; and nourishment of the shoreline near Fullerton Avenue and 31st Street. The estimated project cost for this plan is $213,000,000. Average annual benefits are $61,606,000, of which $46,857,000 are storm damage reduction benefits. The benefit-to-cost ratio is 4.7 at October 1993 price levels. By letters dated February 2,1993 and March 1, 1993, the Chicago Park District and the City of Chicago, indicated their willingness to be the local sponsors. However, they prefer to substitute steel sheet pile, step-stone revetments for the rubblemound revetments in the Lincoln and Burnham Park areas. The estimated cost of this local plan is $259,000,000. The average annual benefits of this plan increase to $68,855,000 for the added recreation. The average annual costs would be $13,102,000. The benefit-to-cost ratio is 5.3.

The Federal cost is estimated at $138,000,000 for shore protection. For the Federal plan, the local sponsor would be required to provide a cash contribution of $75,000,000 and to bear all costs of operation, maintenance, and replacement of the shore protection facilities. The local sponsor has agreed to pay the difference between the Federally supportable plan and the locally preferred plan, an additional $46,000,000, which increases the non-Federal cost to $121,000,000 and the costs of operation, maintenance, and replacement for the local plan, estimated at $438,000 annually.

Fiscal Year 1995 funds will be utilized to complete the first Design Memorandum (DM), initiate work on the second DM and complete plans and specifications for the first construction contract. Fiscal Year 1996 funds will be used to complete the second DM and initiate and complete plans and specifications for the second construction contract.

APPROPRIATION TITLE: Construction, General - Navigation (Fish and Wildlife)

PROJECT: Upper Mississippi River System Environmental Management Program, Illinois, Iowa, Minnesota, Missouri, and Wisconsin (Continuing)

LOCATION: The program is authorized for those river reaches having commercial navigation channels on the Upper Mississippi River, Illinois River, Minnesota River, St. Croix River, and Kaskaskia River in the states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin.

DESCRIPTION: The purpose of the Upper Mississippi River System Environmental Management Program (UMRS-EMP) is to ensure the coordinated development and enhancement of the Upper Mississippi River System, recognizing its several purposes. Habitat rehabilitation and enhancement projects are designed to counteract the effects of backwater sedimentation. Long-Term Resource Monitoring provides for more informed management of the UMRS. Ninety-seven percent of authorized UMRS-EMP funding is for habitat rehabilitation and enhancement projects and Long-Term Resource Monitoring. Recreation projects are an authorized program element but are not being funded due to a low Federal priority. An Economic Impacts of Recreation Study will define the impact of recreational activities on local and regional economies. Navigation Traffic Monitoring is being conducted in conjunction with other navigation studies to ensure that the system is ready to meet the demands of the future.

AUTHORIZATION: FY 1985 Supplemental Appropriations Act, P.L. 99-88; Water Resources Development Act of 1986, PL 99-662, Section 1103; and Water Resources Development Act of 1990, P.L. 101-640, Section 405.

REMAINING BENEFIT-REMAINING COST: The remaining benefit-remaining cost ratio for the entire project is not applicable because monetary benefits are not quantified.

TOTAL BENEFIT-COST RATIO: The total benefit-cost ratio for the entire project is not applicable because monetary benefits are not quantified. Projects are selected and designed on the basis of cost effectiveness.

INITIAL BENEFIT-COST RATIO: The initial benefit-cost ratio for the entire project is not applicable because monetary benefits are not quantified.

BASIS OF BENEFIT-COST RATIO: The basis for the benefit-cost ratio for the entire project is not applicable because monetary benefits are not quantified.

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		$ 246,899,000	
Estimated Non-Federal Cost		3,407,000	
Cash Contribution	$ 3,407,000		
Other Costs	0		
Total Estimated Project Cost		$ 250,306,000	
			Accum. Pct. of Est. Fed. Cost
Allocations to 30 September 1994		94,338,000	
Conference Allowance for FY 1995		19,455,000	
Allocation for FY 1995		16,376,000 1/	
Allocations through FY 1995		110,714,000	45
Allocations Requested for FY 1996		19,455,000	52
Programmed Balance to Complete after FY 1996		116,730,000	
Unprogrammed Balance to Complete after FY 1996		0	

1/ Reflects $3,079,000 reduction assigned as savings and slippage and $2,577,000 in programmed carryover to FY 1996.

STATUS: (1 Jan 1995)		PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE	
Long Term Resource Monitoring		36	Being Determined	
Economic Impacts of Recreation Study		100	(SEP 92)	
Traffic Monitoring		100	(SEP 90)	Parentheses indicate actual date.
Habitat Rehabilitation and Enhancement Projects (Construction)				
Alton Pool, IL	ST. LOUIS DISTRICT	0	Being Determined	
Angle Blackburn, MO	ST. LOUIS DISTRICT	0	Being Determined	
Baldwin Backwater, IL	ST. LOUIS DISTRICT	0	Being Determined	
Batchtown Mgt. Area, IL	ST. LOUIS DISTRICT	0	Being Determined	
Calhoun Point, IL	ST. LOUIS DISTRICT	0	Being Determined	
Clarksville Refuge, MO	ST. LOUIS DISTRICT	100	(APR 90)	
Cuivre Island, MO	ST. LOUIS DISTRICT	0	SEP 96	
Dike Alterations, MO & IL	ST. LOUIS DISTRICT	0	Being Determined	
Dresser Island, MO	ST. LOUIS DISTRICT	100	(SEP 91)	
Least Tern, MO	ST. LOUIS DISTRICT	0	Being Determined	
Norton Woods, MO	ST. LOUIS DISTRICT	0	Being Determined	
Osborne Side Channel, MO	ST. LOUIS DISTRICT	0	Being Determined	
Pharrs Island, Phase I, MO	ST. LOUIS DISTRICT	100	(JUN 92)	
Pharrs Island, Phase II, MO	ST. LOUIS DISTRICT	0	Being Determined	
Pools 25 and 26, MO	ST. LOUIS DISTRICT	0	Being Determined	
Pool 25 Island, MO	ST. LOUIS DISTRICT	0	Being Determined	
Sandy Chute, MO	ST. LOUIS DISTRICT	0	Being Determined	
Stag & Keaton Is., MO	ST. LOUIS DISTRICT	0	Being Determined	
Stump Lake, IL	ST. LOUIS DISTRICT	30	DEC 95	
Swan Lake, IL	ST. LOUIS DISTRICT	5	Being Determined	
Andalusia Refuge, IL	ROCK ISLAND DISTRICT	100	(DEC 94)	
Banner Marsh, IL	ROCK ISLAND DISTRICT	0	Being Determined	
Bay Island, MO	ROCK ISLAND DISTRICT	100	(NOV 94)	

STATUS: (Continued)

		PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Bertom Lake, WI	ROCK ISLAND DISTRICT	100	(JUN 92)
Big Timber, IA	ROCK ISLAND DISTRICT	99	JUN 95
Brown's Lake, IA	ROCK ISLAND DISTRICT	100	(SEP 94)
Chautauqua Refuge, IL	ROCK ISLAND DISTRICT	25	JUN 96
Cottonwood Island, MO	ROCK ISLAND DISTRICT	0	Being Determined
Gardner Div., IL	ROCK ISLAND DISTRICT	0	Being Determined
Huron Island, IA	ROCK ISLAND DISTRICT	0	Being Determined
Lake Odessa, IA	ROCK ISLAND DISTRICT	0	Being Determined
Molo Slough, IA	ROCK ISLAND DISTRICT	0	Being Determined
Monkey Chute, MO	ROCK ISLAND DISTRICT	100	(AUG 89)
Peoria Lake, IL	ROCK ISLAND DISTRICT	0	OCT 96
Pleasant Creek, IA	ROCK ISLAND DISTRICT	0	Being Determined
Pool 11 Islands, WI	ROCK ISLAND DISTRICT	0	Being Determined
Potters Marsh, IL	ROCK ISLAND DISTRICT	0	JAN 96
Princeton, IA	ROCK ISLAND DISTRICT	0	Being Determined
Rice Lake, IL	ROCK ISLAND DISTRICT	0	Being Determined
Spring Lake, IL	ROCK ISLAND DISTRICT	0	Being Determined
Ambrough Slough, WI	ST. PAUL DISTRICT	0	Being Determined
Blackbird Slough, MN	ST. PAUL DISTRICT	0	Being Determined
Blackhawk Park, WI	ST. PAUL DISTRICT	100	(NOV 90)
Bussey Lake, IA	ST. PAUL DISTRICT	60	Being Determined
Capoli Slough, WI	ST. PAUL DISTRICT	2	Being Determined
Cold Springs, WI	ST. PAUL DISTRICT	100	(JUN 94)
Conway Lake, IA	ST. PAUL DISTRICT	0	Being Determined
East Channel, WI, MN	ST. PAUL DISTRICT	5	Being Determined
Finger Lakes, MN	ST. PAUL DISTRICT	100	(JUL 94)
Guttenberg Fish Ponds, IA	ST. PAUL DISTRICT	100	(NOV 89)

Parentheses indicate actual date.

STATUS: (Continued)

		PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Harpers Slough, WI	ST. PAUL DISTRICT	0	Being Determined
Indian Slough, WI	ST. PAUL DISTRICT	100	(JUN 94)
Island 42, MN	ST. PAUL DISTRICT	100	(MAY 87)
Lake Onalaska, WI	ST. PAUL DISTRICT	100	(OCT 89)
Lansing Big Lake, IA	ST. PAUL DISTRICT	100	(NOV 94)
Long Lake, WI	ST. PAUL DISTRICT	0	DEFERRED
Long Meadow Lake, MN	ST. PAUL DISTRICT	2	Being Determined
Miss. Rvr Bank Stabilization, MN/WI	ST. PAUL DISTRICT	5	Being Determined
Peterson Lake, MN	ST. PAUL DISTRICT	10	SEP 96
Polander Lake, MN	ST. PAUL DISTRICT	40	Being Determined
Pool 8 Isl, Phase I, WI	ST. PAUL DISTRICT	100	(JUN 93)
Pool 8 Isl, Phase II, WI	ST. PAUL DISTRICT	4	Being Determined
Pool 9 Isl Protection, WI	ST. PAUL DISTRICT	15	SEP 96
Pool Slough, IA, MN	ST. PAUL DISTRICT	2	Being Determined
Rice Lake, MN	ST. PAUL DISTRICT	7	SEP 97
Spring Lake, WI	ST. PAUL DISTRICT	98	JUN 95
Spring Lake Isl, WI	ST. PAUL DISTRICT	2	Being Determined
Trempealeau NWR, WI	ST. PAUL DISTRICT	10	Being Determined
Whitewater River, MN	ST. PAUL DISTRICT	2	Being Determined
Other Habitat Projects		0	Being Determined
Recreation		0	UNSCHEDULED
Entire Project, Except Recreation		40	Being Determined

Parentheses indicate actual date.

JUSTIFICATION: Implementation of the Upper Mississippi River System Environmental Management Program is essential to the continued viability of the Upper Mississippi River System and important to the long-term public acceptance and support of the navigation project. Habitat Rehabilitation and Enhancement projects will help counteract the negative effects of natural and human-induced factors on the system's backwaters and side channels. Projects are selected and designed on the basis of habitat outputs cost effectiveness. Long-Term Resource Monitoring assists in evaluating the performance of habitat projects, estimates the extent of continued habitat losses, and analyzes sediment and navigation-related problems and solutions. An Economic Impacts of Recreation Study is enabling Federal and non-Federal management decisions to better consider impacts on recreation and the consequent changes in recreation-related expenditures in the local and regional economies. Traffic monitoring will help ensure that the system is ready to meet the demands of the future.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $19,455,000 and $2,577,000, respectively, will be applied as follows:

PROJECT	DISTRICT		STATUS
Calhoun Point, IL	ST. LOUIS DISTRICT	$ 450,000	Continue Design
Cuivre Island, MO	ST. LOUIS DISTRICT	966,000	Complete Construction
Norton Woods, MO	ST. LOUIS DISTRICT	170,000	Initiate Design
Stump Lake, IL	ST. LOUIS DISTRICT	1,405,000	Complete Construction
Swan Lake, IL	ST. LOUIS DISTRICT	2,371,000	Continue Construction
Banner Marsh, IL	ROCK ISLAND DISTRICT	141,000	Initiate Construction
Bay Island, MO	ROCK ISLAND DISTRICT	5,000	Complete Construction
Chautauqua Refuge, IL	ROCK ISLAND DISTRICT	812,000	Complete Construction
Cottonwood Island, MO	ROCK ISLAND DISTRICT	230,000	Complete Design
Gardner Division, IL	ROCK ISLAND DISTRICT	50,000	Continue Design
Lake Odessa, IA	ROCK ISLAND DISTRICT	60,000	Continue Design
Peoria Lake, IL	ROCK ISLAND DISTRICT	218,000	Continue Construction
Pool 11 Islands, WI	ROCK ISLAND DISTRICT	235,000	Continue Design
Potters Marsh, IL	ROCK ISLAND DISTRICT	146,000	Complete Construction
Princeton, IA	ROCK ISLAND DISTRICT	1,102,000	Continue Construction
Rice Lake, IL	ROCK ISLAND DISTRICT	67,000	Continue Design
Spring Lake, IL	ROCK ISLAND DISTRICT	1,863,000	Continue Construction
Ambrough Slough, WI	ST. PAUL DISTRICT	120,000	Continue Design

FISCAL YEAR 1996 (Continued)

PROJECT	DISTRICT		STATUS
Blackbird Slough, MN	ST. PAUL DISTRICT	50,000	Continue Design
Bussey Lake, IA	ST. PAUL DISTRICT	942,000	Continue Construction
Capoli Slough, WI	ST. PAUL DISTRICT	90,000	Continue Design
Conway Lake, IA	ST. PAUL DISTRICT	40,000	Continue Design
East Channel, WI/MN	ST. PAUL DISTRICT	47,000	Continue Design
Harpers Slough, WI	ST. PAUL DISTRICT	120,000	Continue Design
Long Meadow Lake, MN	ST. PAUL DISTRICT	105,000	Continue Design
Miss Rvr. Bank MN/WI	ST. PAUL DISTRICT	730,000	Continue Construction
Peterson Lake, MN	ST. PAUL DISTRICT	313,000	Continue Construction
Polander Lake, MN	ST. PAUL DISTRICT	40,000	Continue Construction
Pool 8 Islands Creation (Phase II), WI	ST. PAUL DISTRICT	75,000	Continue Design
Pool 9 Island, WI	ST. PAUL DISTRICT	282,000	Continue Construction
Pool Slough, IA	ST. PAUL DISTRICT	19,000	Continue Design
Rice Lake, MN	ST. PAUL DISTRICT	125,000	Initiate Construction
Spring Lake Islands, WI	ST. PAUL DISTRICT	134,000	Initiate Construction
Trempealeau NWR, WI	ST. PAUL DISTRICT	1,328,000	Continue Construction
Whitewater River, MN	ST. PAUL DISTRICT	25,000	Continue Design
Long Term Resource Monitoring		5,955,000	Continue
Program Management		1,315,000	Continue
GRAND TOTAL		22,032,000	

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986 and amended by Section 107(b) of the Water Resources Development Act of 1992, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance, Repair, Rehabilitation and Replacement Costs
Pay 25 percent of the first costs allocated to fish and wildlife enhancement for the following projects:		
Banner Marsh, IL	1,221,000	
Blackhawk Park, WI	77,000	
Bussey Lake, IA	44,000	
Cuivre Island, MO	56,000	
Peoria Lake, IL	1,249,000	
Pool Slough, IA, MN	115,000	
Princeton, IA	23,000	
Rice Lake, IL	360,000	
Swan Lake, IL	262,000	
Subtotal	$3,407,000	
Pay 50% of the first costs allocated to recreation projects. 1/	$ 0	
Total non-Federal Construction Costs	$3,407,000	

1/ No recreation projects budgeted.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance, Repair, Rehabilitation and Replacement Costs
Pay 100 percent of the costs of operation, maintenance, and repair of projects located on lands managed by a non-federal agency. 1/		
Combined habitat projects		$ 330,800

1/ Section 107 (b) of WRDA 92 changed the requirements for operation and maintenance from 25 percent non-Federal/75 percent Federal to 100 percent responsibility to the agency managing the land for fish and wildlife purposes.

The non-Federal sponsors have also agreed to make all required payments concurrently with project construction or reimburse their share of construction costs over the life of each project.

STATUS OF LOCAL COOPERATION: A Project Cooperation Agreement (PCA) is required only for a project that is not located on lands managed as a national wildlife refuge.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $246,899,000 is a decrease of $3,079,000 from the latest estimate ($249,978,000) presented to Congress (FY 1995). This change is due to the following item:

Item	Amount
Sundry 1/	$ -3,079,000
Total	$ -3,079,000

1/ The Federal cost estimate has been decreased by $3,079,000 to reflect the fixed ceilings established for this program.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: National Environmental Policy Act compliance is being accomplished prior to implementation of specific project construction.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1985.

APPROPRIATION TITLE: Construction General-Shoreline Protection

PROJECT: Presque Isle Peninsula, Pennsylvania (Permanent)(Continuing)

LOCATION: Presque Isle Peninsula is located in the city of Erie, Erie County, Pennsylvania, on the south shore of Lake Erie 78 miles southwest of Buffalo, New York and about 102 miles northeast of Cleveland, Ohio.

DESCRIPTION: The initial construction at Presque Isle State Park consisted of a system of 55 rubblemound breakwaters located offshore along the lakeward length of Presque Isle Peninsula and placement of approximately 560,000 tons of beach sand fill. Each breakwater is 150 feet long with a 350 foot gap between structures. The initial construction was completed in November 1992, but in order to maintain the beaches, a periodic nourishment program for 50 years following the initial project construction is required.

AUTHORIZATION: Water Resources Development Act of 1986 (Public Law 99-662)

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable because initial construction has been completed.

TOTAL BENEFIT-COST RATIO: 1.08 to 1 at 8-7/8 percent.

INITIAL BENEFIT-COST RATIO: 1.3 to 1 at 8-7/8 percent (FY 1988)

BASIS OF BENEFIT-COST RATIO: Benefits based on the Phase II General Design Memorandum approved 27 July 1988 at January 1986 price levels.

SUMMARIZED FINANCIAL DATA

				Accum. Pct. of Est. Fed. Cost
Estimated Federal Cost			$ 59,927,000	
Programmed Construction		$59,927,000		
Initial Construction	$13,427,000			
Periodic Nourishment	46,500,000			
Estimated Non-Federal Cost			59,927,000	
Programmed Construction		59,927,000		
Initial Construction				
Cash Contribution	13,427,000			
Other Costs (Lands)	0			
Periodic Nourishment				
Cash Contribution	46,500,000			
Other Costs	0			
Total Estimated Project Cost			$119,854,000	
Initial Construction	26,854,000			
Periodic Nourishment	93,000,000			
Allocations to 30 September 1994		14,330,000		
Conference Allowance for FY 1995		425,000		
Allocations for FY 1995		314,000 1/		
Allocations through FY 1995		14,644,000		25
Allocation Requested for FY 1996		450,000		26
Programmed Balance to Complete after FY 1996		44,833,000		
Unprogrammed Balance to Complete after FY 1996		0		

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Initial Construction	100	Nov 1992
Periodic nourishment	4	Being Determined

PHYSICAL DATA

Initial Construction:
55 Rubblemound Offshore Breakwaters.
560,000 Tons of Beach Replenishment.
Removal of some existing shore protection structures.

Periodic nourishment:
55,000 Tons of Beach Nourishment (Annually)

1/ Reflects $ 67,000 assigned as savings and slippage, $44,000 reprogrammed from the project, and $9,000 in programmed carryover to FY 1996.

DIVISION: North Central

DISTRICT: Buffalo

Presque Isle Peninsula,
Pennsylvania
(Permanent Project)

JUSTIFICATION: Presque Isle Peninsula, with a lakeward perimeter of about 9 miles, has been segmented into 11 bathing beaches by the Pennsylvania Park Service. Several of these beaches have a 150-year history of serious erosion. In 1956, the Federal Government, in cooperation with the Commonwealth of Pennsylvania, completed an erosion control project on Presque Isle Peninsula. Since 1956, the project proved to be inadequate, due in part to above average and record high lake levels, and sand nourishment measures were required periodically through the 1960's and early 1970's, and annually since 1975 to protect the Federal Erie Harbor Navigation Project and state park facilities along the neck of the peninsula. These sand nourishment measures are not a complete solution to the erosion problem. The annual sand nourishment costs are rising each year making the continuation of annual nourishment an increasingly expensive means of providing protection. In addition, the availability of sufficient quantities of suitable quality sand from land sources is declining as the demand continually increases. The declining land sources have led to acquisition of higher priced sand from offshore zones. Therefore, a more effective solution for protecting the peninsula and park facilities was developed. The benefits based on the Phase II General Design Memorandum and the traditional construction period are as follows:

Annual Benefits	Amount
Decreased Maintenance Cost	$ 167,000
Structural Damage Prevented	7,000
Land Loss Prevention	21,000
Decreased Dredging Costs	353,400
Decreased Nourishment Cost	2,265,600
Total	$ 2,814,000

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $450,000 and $9,000, respectively, will be applied as follows:

Place sand (Annual Nourishment)	$ 380,000
Planning, Engineering and Design	64,000
Construction Management	15,000
Total	$ 459,000

NON-FEDERAL COST: In accordance with the cost-sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Pay one-half of the separable costs allocated to recreation, including periodic nourishment, and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of breakwater features.	$ 59,919,000	$ 46,000
Provide lands, easements, rights of way, and dredged material disposal areas.	8,000	
Total Non-Federal Costs	$ 59,927,000	$ 46,000

The non-Federal sponsor has agreed to make all required payments concurrently with project construction and its share of periodic nourishment costs within the life of the project.

STATUS OF LOCAL COOPERATION: The Local Cooperation Agreement was executed by the Assistant Secretary of the Army on 22 June 1989. The current non-Federal cost estimate of $59,927,000, is a decrease of $5,323,000 from the non-Federal cost estimate of $65,250,000 based on a reduction of anticipated inflation, an increase in the contingency allowance, the correction of an error in the full funding of the previous estimate and additional costs for monitoring Gull Point. In a letter dated 3 October 1988, the non-Federal sponsor indicated that it is financially capable and willing to contribute the non-Federal share of the project.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal Cost Estimate of $59,927,000 is a decrease of $5,323,000 from the latest estimate ($65,250,000) presented to Congress (FY 1995). This change includes the following items:

Item	Amount
Reduction of Anticipated Inflation, Increase of Contingency Allowance and Revision of Error	$ -5,751,000
Additional Costs for Monitoring Gull Point	428,000
Total	$ -5,323,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement was filed with USEPA on 13 March 1981. The provisions of Section 404 of the Clean Water Act were met by the Public Notice issued on 9 October 1979, a Section

404(b)(1) Evaluation dated 21 December 1979, and a Section 401 Water Quality Certificate issued by the Commonwealth of Pennsylvania dated 8 August 1988. The Record of Decision which completed the NEPA process was signed by the Director of Civil Works on 2 November 1988.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1988 and funds to initiate construction were appropriated in FY 1989.

APPROPRIATION TITLE: Construction, General - Local Protection Project (Flood Control)

PROJECT: Loves Park, Illinois (Continuing)

LOCATION: Loves Park is located in Winnebago County in north central Illinois, just north of the city of Rockford.

DESCRIPTION: The project will provide 100-year protection for a highly urbanized portion of the city of Loves Park along Loves Park Creek. The project will divert excess runoff to detention areas. There, floodwaters will be stored until channel stages subside such that the floodwaters may be evacuated from the detention areas. The protective works include 17,900 lineal feet of improved channel, 3 detention lakes, and a pump station.

AUTHORIZATION: Water Resources Development Act of 1986 (Public Law 99-662).

REMAINING BENEFIT-REMAINING COST RATIO: 2.3 to 1 at 8-5/8 percent.

TOTAL BENEFIT-COST RATIO: 1.3 to 1 at 8-5/8 percent.

INITIAL BENEFIT-COST RATIO: 1.4 to 1 at 8-5/8 percent (FY 1990).

BASIS OF BENEFIT-COST RATIO: Analysis based on General Design Memorandum dated March 1988.

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		$ 21,100,000
Estimated Non-Federal Cost		9,400,000
Cash Contribution	1,557,000	
Other	7,843,000	
Total Estimated Project Cost		$ 30,500,000

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	19	Being Determined

PHYSICAL DATA

Relocations:	Bridge & Utilities	($2,080,000)
Channels:	17,900 feet	
Pump Plant:	1	

Division: North Central

District: Rock Island

SUMMARIZED FINANCIAL DATA (CONTINUED)

			Accum. Pct. of Est. Fed. Cost
Allocations to 30 Sep 1994	$ 5,049,000		
Conference Allowance for FY 1995	4,600,000		
Allocation for FY 1995	5,262,000	1/	
Allocations through FY 1995	$10,311,000	2/	49
Allocation Requested for FY 1996	750,000		52
Programmed Balance to Complete after FY 1996	10,039,000		
Unprogrammed Balance to complete after FY 1996	0		

1/ Reflects $728,000 reduction assigned as Savings and Slippage, and $1,390,000 reprogrammed to the project.
2/ Reflects $4,810,000 in programmed carryover to FY 1996.

JUSTIFICATION: The Loves Park Creek floodplain is dominated by residential neighborhoods, with some concentrations of industrial and commercial development. Flooding problems are caused by intense storms falling over the highly urbanized 7.8 square mile drainage basin of Loves Park Creek. Loves Park Creek, which bisects the city, has inadequate channel capacity and hydraulically inefficient bridges which are incapable of handling the amount of runoff produced by such storms (estimated that a 2 year flood would exceed existing channel capacity). Major floods along Loves Park Creek have been of a flash flood nature and of short duration (less than 1 day). The most recent flooding occurred in April 1973, 1975, 1978, and June 1974. The maximum flood of record occurred on April 20, 1973, with damage estimated at $2,780,000. Damages under present conditions of development are estimated at $8,140,000 at 1994 price levels. The April 1978 flood caused an estimated $1,085,000 in damages ($2,170,000 in 1994 price levels), and is estimated to be a 2 to 5 year frequency flood. A 100-year flood would cause an estimated $18,000,000 in damage. Average annual damages caused by flooding along Loves Park Creek are estimated at $3,552,000 of which over 90 percent are attributable to residential damages (average value of a residential structure is estimated at $42,000). Of the total annual benefits of $3,055,600 produced by the project, less than 11 percent are future benefits. The preceding annual damage and benefit calculations are based on the economic analysis included in the General Design Memorandum for Loves Park, IL dated March 1988, approved November 1988, and revised September 1989.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $750,000 and $4,810,000, respectively, will be applied as follows:

Complete Utility Relocations	$ 335,000
Initiate Stage IIB, Channels	698,000
Continue Stage IIA2, Channels	3,911,000
Lands and Damages Acquisition Expense	28,000
Planning, Engineering, and Design	154,000
Construction Management	434,000
Total	$5,560,000

NON-FEDERAL COSTS: In accordance with the cost-sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, and rights-of-way	$5,900,000 1/	
Modify or relocate buildings, utilities, roads bridges (except railroad bridges), and other facilities where necessary in the construction of the project	1,320,000	
In accordance with Assistant Secretary of Army (Civil Works) decision of 17 May 1988, the Government shall apply credit for external compatible work associated with the construction of the Pebble Creek Dam	439,000	
Provide services for Planning, Engineering and Design and Construction Management for relocation work	184,000	

1/ Includes $60,000 in costs sunk prior to construction by the local sponsor.

NON-FEDERAL COSTS: (Continued)

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Pay 5 percent of the cost allocated to flood control in cash to bring the total non-Federal share of flood control costs to 30 percent, and bear all cost of operation, maintenance, repair, rehabilitation, and replacement of flood control facilities	1,557,000	$25,200
Total Non-Federal Cost	$9,400,000	$25,200

The Non-Federal sponsor has also agreed to make required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The city of Loves Park, Illinois is the local sponsor for this project. The Local Cooperation Agreement was executed on 26 March 1991. The State of Illinois has executed an agreement with the city that provides for $3,550,000 in financial assistance for the project. The current non-Federal cost estimate of $7,843,000 which includes a cash contribution of $1,557,000 is a decrease of $352,000 from the non-Federal cost estimate of $8,195,000 noted in the LCA, which included a cash contribution of $1,375,000. The non-Federal sponsor is financially capable and willing to contribute the increased non-Federal share.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal Cost Estimate of $21,100,000 is a decrease of $300,000 from the latest estimate ($21,400,000) presented to Congress (FY 1995). This change includes the following:

ITEM	AMOUNT
Price Escalation on Construction Features	$ -211,000
Post Contract Award and Other Estimating Adjustments	-89,000
Total	$ -300,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement (EIS) was approved by the Council on Environmental Quality on 14 March 1980. In 1985, an Environmental Assessment (EA) was coordinated to address changes to the project incorporated in the General Reevaluation Report which resulted in a Finding of No Significant Impact (FONSI) which was signed in December 1986. An EA addressing further changes identified in the General Design Memorandum has been prepared and was released for Public Review on 17 July 1990. The review resulted in a FONSI, which was signed on 11 October 1991. With regard to Section 404 requirements, the project is covered under a nation wide permit, however, Section 401, State Certification was required from the State of Illinois. Certification was received on 24 September 1990.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1985. Funds to initiate construction were appropriated in FY 1990.

APPROPRIATION TITLE: Construction, General - Local Protection Project (Flood Control)

PROJECT: McCook and Thornton Reservoirs, Illinois (Continuing)

LOCATION: The project area covers 341 square miles of the combined sewer area in Chicago and 48 adjacent suburban communities.

DESCRIPTION: The authorized project consists of constructing two reservoirs in existing stone quarries located in McCook and Thornton, Illinois, having floodwater storage capacities of 32,100 and 14,600 acre-feet, respectively. Supporting facilities include connecting hydraulic structures, an aquifer protection system, and an aeration system. The reservoirs will serve as the terminus of the Metropolitan Water Reclamation District of Greater Chicago's TARP project (Tunnel and Reservoir Plan) Phase I tunnels. The TARP project is designed to control flooding due to sewer back-up. The McCook reservoir will control flooding on the Mainstream and Des Plaines Systems. The Thornton reservoir will control flooding on the Calumet System.

AUTHORIZATION: Water Resources Development Act of 1988 (Public Law 100-676).

REMAINING BENEFIT-REMAINING COST RATIO: 2.1 to 1 at 8-1/2 percent.

TOTAL BENEFIT-COST RATIO: 2.0 to 1 at 8-1/2 percent.

INITIAL BENEFIT-COST RATIO: 2.1 to 1 at 8-1/2 percent (FY 1994).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation approved in January 1987 at October 1985 price levels.

SUMMARIZED FINANCIAL DATA		
Estimated Federal Cost		$ 416,000,000
Estimated Non-Federal Cost		137,000,000
Cash Contributions	69,989,000	
Other Costs	67,011,000	
Total Estimated Project Cost		$ 553,000,000

Status: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
McCook Reservoir	0	Being Determined
Thornton Reservoir	0	Being Determined

Division: North Central District: Chicago McCook and Thornton Reservoirs, Illinois

SUMMARIZED FINANCIAL DATA (Continued)

			Accum. Pct. of Est. Fed. Cost
Allocations to 30 September 1994	$ 22,374,000		
Conference Allowance for FY 1995	4,100,000		
Allocation for FY 1995	3,451,000	1/	
Allocations through FY 1995	25,825,000	2/	6
Allocation Requested for FY 1996	0		6
Programmed Balance to Complete after FY 1996	390,175,000		
Unprogrammed Balance to Complete after FY 1996	0		

PHYSICAL DATA

McCook Reservoir	
Storage Capacity	32,100 acre-feet
Thornton Reservoir	
Storage Capacity	14,600 acre-feet

1/ Reflects $649,000 reduction assigned as Savings and Slippage.
2/ Reflects $11,478,000 in programmed carryover into FY 1996.

JUSTIFICATION: The McCook and Thornton Reservoirs Project covers 341 square miles of the combined sewer area in Chicago and 48 adjacent suburban communities. Within this region, over 500,000 homes suffer flooding attributable to sewer outfall submergence caused by the inadequate capacity of the area watercourses. More than 170,000 structures are flooded to varying degrees on an average annual basis. Also the frequency of beach closures associated with backflows to Lake Michigan will be reduced. Average annual benefits are as follows:

Annual Benefits	Amount
Flood Damage Prevention	$ 77,584,600
Recreation	612,000
Water Quality	9,489,000
Water Supply	6,326,000
Total	$94,011,600

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $0 and $11,478,000, respectively, will be applied as follows:

McCook Reservoir	
Initiate construction of the Monitoring Wells	$ 1,349,000
Real Estate Management	173,000
Planning, Engineering, and Design	8,574,000
Construction Management	130,000
Thornton Reservoir	
Planning, Engineering, and Design	1,252,000
Total	$ 11,478,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payment During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
McCook Reservoir		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$54,017,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	3,721,000	
Pay 11 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	43,262,000	8,463,000
Total McCook Reservoir	$101,000,000	$8,463,000

Requirements of Local Cooperation (Continued)	Payment During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Thornton Reservoir		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$ 8,424,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	849,000	
Pay 18 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	26,727,000	2,676,000
Total Thornton Reservoir	$ 36,000,000	$ 2,676,000
Total Non-Federal	$137,000,000	$11,139,000

The non-Federal sponsor has agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The Metropolitan Water Reclamation District of Greater Chicago will be the local sponsor for the project. A draft Project Cooperation Agreement has been prepared and coordinated with the local sponsor. The PCA for the McCook Reservoir is scheduled to be executed in June 1996.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $416,000,000 is a decrease of $72,000,000 from the latest estimate ($488,000,000) presented to Congress (FY 1995). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	$ -4,000,000
Design Changes	-68,000,000
Total	$-72,000,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Finding of No Significant Impact for the authorized project was signed on December 5, 1986. An Environmental Impact Statement for the McCook Reservoir project is scheduled to be completed in FY 1996.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1988. Funds to initiate construction were appropriated in FY 1994.

SEPARABLE ELEMENT: McCook Reservoir, Illinois

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		$303,000,000
Non-Federal Cost		$101,000,000
Cash Contributions	$ 43,262,000	
Other Costs	$ 57,738,000	
Total Estimated Project Cost		$404,000,000

REMAINING BENEFIT-REMAINING COST RATIO: 2.2 to 1 at 8-1/2 percent

TOTAL BENEFIT-COST RATIO: 2.0 to 1 at 8-1/2 percent

SEPARABLE ELEMENT: Thornton Reservoir, Illinois

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		$113,000,000
Non-Federal Cost		$ 36,000,000
Cash Contributions	$26,727,000	
Other Costs	$ 8,423,000	
Total Estimated Project Cost		$149,000,000

REMAINING BENEFIT-REMAINING COST RATIO: 1.7 to 1 at 8-1/2 percent

TOTAL BENEFIT-COST RATIO: 1.7 to 1 at 8-1/2 percent

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Fort Wayne Metropolitan Area, Indiana (Continuing)

LOCATION: The Fort Wayne Metropolitan Area is located in northeastern Indiana, in Allen County.

DESCRIPTION: The project would provide 100 year level flood protection by the construction of 54,000 feet of new or upgrade levees, floodwalls, and road closures along the St. Marys, St Joseph, and Maumee Rivers and Spy Run Creek. The construction is divided into four segments, the Lower East segment (11,000 ft) along the Maumee and St. Joseph Rivers, the Upper East segment (15,000 ft) along the St. Joseph River, the Central segment (13,000 ft) along the St. Joseph River, the St. Marys River, and Spy Run Creek, and the West segment (15,000 ft) along the St. Marys River. The project also includes 4 miles of hiking/biking trails.

AUTHORIZATION: Water Resources Development Act of 1990 (Public Law 101-640)

REMAINING BENEFIT-COST RATIO: 2.3 to 1 at 8 1/2 percent.

TOTAL BENEFIT-COST RATIO: 2.3 to 1 at 8 1/2 percent.

INITIAL BENEFIT-COST RATIO: 2.3 to 1 at 8 1/2 percent (FY 1994).

BASIS OF BENEFIT-COST RATIO: Benefits are from the General Design Memorandum, dated May 1993 (revised August 1993).

SUMMARIZED FINANCIAL DATA			Accum. Pct.of Est. Fed. Cost	STATUS: (1 JAN 95)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$ 33,866,000				
Estimated Non-Federal Cost		10,872,000		Entire Project	0	Being Determined
Cash Contribution	2,691,000					
Other Costs	8,181,000					
Total Estimated Project Cost		$ 44,738,000				

SUMMARIZED FINANCIAL DATA (Continued)

			Accum. Pct. of Est. Fed. Cost
Allocations to 30 September 1994	3,747,000		
Conference Allowance for FY 1995	1,000,000		
Allocation for FY 1995	1,138,000	1/	
Allocation through FY 1995	4,885,000		14
Allocation Requested for FY 1996	4,000,000		26
Programmed Balance to Complete after FY 1996	24,981,000		
Unprogrammed Balance to Complete after FY 1996	0		

PHYSICAL DATA

54,000 feet of levees, floodwalls,
steel pile walls and road closures.
Four miles of hiking/biking trails.

1/ Reflects $158,000 savings and slippage, and $296,000 reprogrammed to the project.

JUSTIFICATION: In the city of Fort Wayne, the St. Joseph and St. Marys Rivers join to form the Maumee River. Generally, crucial flood periods occur when heavy winter and spring rains are coupled with snowmelt. The flood of record occurred in March 1913. About 5,000 acres within the city limits were covered with up to four feet of water. The Maumee River crested at 26.1 feet, eleven feet over the flood stage of 15.0 feet. In all, 5,500 homes and businesses suffered extensive damage, the municipal lighting power plant was flooded, six people died, and approximately 15,000 people were homeless. Total damage due to the flood was $4,800,000 which would be over $229,000,000 today. The flood of February 1982 ranks second to the flood of 1913 and caused over $62,400,000 in damages in today's dollars. The Maumee River remained above flood stage for two weeks, cresting at 25.9 feet and affected about 1,800 residential structures and 184 businesses in the primary flood areas. The flood damaged approximately eight miles of levees in Fort Wayne. The most serious damage was to the Pemberton Dike, a 3,000 foot long levee, which protects a residential area. It was estimated that an additional $30,000,000 in damages would have occurred had the dike failed. The recommended project would provide approximately 54,000 linear feet of floodwall, levee, and slope protection along the Maumee, St. Marys, and St Joseph Rivers, and Spy Run Creek. Interior drainage improvements would be made as necessary. The project also includes recreational hiking/biking trails and complementary features. Average annual benefits are as follows:

Annual Benefits	Amount
Flood Damage Prevention	$ 8,237,000
Recreation	$ 346,000
Total	$ 8,583,000

FISCAL YEAR 1996: The requested amount of $4,000,000 will be applied as follows:

Continue Construction of Lower East Segment	$ 1,878,000
Initiate Construction of Upper East Segment	787,000
Engineering during Construction	862,000
Construction Management	473,000
TOTAL	$ 4,000,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$ 4,840,000	0
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	$ 3,341,000	0
Pay 6.15 percent of the costs allocated to flood control to bring the total Non-Federal share of flood control costs to 25 percent as reduced for credit based on prior work (Section 104 of the Water Resources Act of 1986 or Section 215 of the Flood Control Act of 1968) and bears all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	$ 2,185,000	$ 85,000

NON-FEDERAL COST: (Continued)

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Pay one-half of the separable costs allocated to recreation (except recreational navigation) and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of recreation facilities.	$ 506,000	0
Total Non-Federal Cost	$ 10,872,000	$ 85,000

STATUS OF LOCAL COOPERATION: The Project Cooperation Agreement was signed on 22 August 1994. The current non-Federal cost estimate is $10,872,000, which includes a cash contribution of $2,691,000. The non-Federal cost estimate has not changed from the non-Federal cost estimate noted in the PCA, which included a cash contribution of $2,748,100. The local sponsors obtained $6.5 million of the non-Federal share through the sale of bonds in November 1994. The non-Federal sponsor is financially capable and willing to contribute the increased non-Federal share.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $ 33,866,000 is a decrease of $158,900 from the initial estimate ($34,024,900) presented to Congress (FY 1995). This change reflects a refinement in the cost distribution between Federal and non-Federal shares. There is no change in the total project cost.

Item	Amount
Sundry	$ -158,900
Total	$ -158,900

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement was filed with EPA in August 1988. An Environmental Assessment was completed with a Finding of No Significant Impact in August 1993. This project is in compliance with the Clean Water Act of 1977.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1988. Funds to initiate construction were appropriated in FY 1994.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Little Calumet River, Indiana (Continuing)

LOCATION: The Little Calumet River Basin, Northwest Indiana, Lake County.

DESCRIPTION: The project consists of replacing 9.5 miles of existing spoil bank levees with 12.1 miles of new levees, floodwalls, and closure and appurtenant structures between the Illinois-Indiana State line and Cline Avenue in Gary, Indiana; constructing 9.7 miles of set-back levees and appurtenant drainage structures; installing a flow control structure at Hart Ditch; permanent evacuation of 37 structures in the Black Oak area of Gary, Indiana; flood proofing 53 residential structures in Gary, Munster and Griffith; modifying 7 miles of channel with 3 accompanying bridge culvert modifications; modifying 1 highway bridge; constructing 16.8 miles of hiking/biking trails and accompanying recreation support facilities, and preserving 788 acres of wildlife habitat.

AUTHORIZATION: Water Resources Development Act of 1986 (Public Law 99-662).

REMAINING BENEFIT-REMAINING COST RATIO: 1.8 to 1 at 8-5/8 percent

TOTAL BENEFIT-COST RATIO: 1.5 to 1 at 8-5/8 percent

INITIAL BENEFIT-COST RATIO: 2.1 to 1 at 8-5/8 percent (FY 1990)

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation approved in October 1994 at 1993 price levels.

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		$ 104,000,000
Estimated Non-Federal Cost		41,000,000
Cash Contributions	8,729,000	
Other Costs	32,271,000	
Total Estimated Project Cost		$ 145,000,000

STATUS: (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	16	Being Determined

PHYSICAL DATA

Levees and Floodwalls	21.8 miles
Pumping Plant Modifications	17
Structures Removed	37
Structures Floodproofed	53
Channel Modification	7 miles
Hiking Trails	16.8 miles

SUMMARIZED FINANCIAL DATA (Continued)

		Accum. Pct. of Est. Fed. Cost
Allocations to 30 September 1994	$33,413,000	
Conference Allowance for FY 1995	3,300,000	
Allocation for FY 1995	5,678,000 1/	
Allocations through FY 1995	39,091,000 2/	38
Allocation Requested for FY 1996	5,000,000	42
Programmed Balance to Complete After FY 1996	59,909,000	
Unprogrammed Balance to Complete after FY 1996	0	

1/ Reflects $522,000 reduction assigned as Savings and Slippage and $2,900,000 reprogrammed to the project.
2/ Reflects $6,900,000 in programmed carryover to FY 1996.

JUSTIFICATION: Overbank flood damages occur to 8,600 structures, primarily residential, along the Little Calumet River in Indiana within the communities of Hammond, Munster, Griffith and Gary. The total value of these structures is in excess of $775 million. Flood damages also occur to commercial and public buildings, golf courses and the transportation network. The major highway transportation link between the Chicago metropolitan area and the eastern United States, Interstate 80/94, is susceptible to closure beginning at a 40-to 50-year flood event. Average annual damages (October 1993 price levels) prevented are estimated at $15,642,000. The project will provide essentially a 200-year level of flood protection. An estimated $35 million in flood damages were incurred and one life lost in the November 1990 flood, the most recent significant flood event. The communities of Hammond, Highland and Munster, IN were inundated. The President declared the area inundated by the November 1990 flood a National Disaster Area on December 6, 1990. The State of Indiana continues to rate the flood damage potential along the Little Calumet River as the most severe in the state. The project avoids the short-and long-term adverse impacts associated with the destruction or modification of wetlands by designating the existing wetland areas in the Gary reach for overbank flood storage, a vital requirement of the hydraulic operation and design of the project, and hence required project lands. Environmental attributes are being mitigated for, as well as, enhanced along the river corridor. Lake County, Indiana qualifies as an area of persistent and chronic unemployment. A minority plan has been developed that identifies construction contracts which can be set aside for small business contractors and minority owned/Section 8A contractors who exist in the project area. A 40 percent minority participation goal has been establish for all future construction contracts for the Contractor's aggregate workforce in each trade. The project will create 424 man-years of labor during the nine-year construction period.

JUSTIFICATION (CONTINUED):

Average annual benefits are as follows:

Annual Benefits	Amount
Flood Damage Prevention	$15,642,000
Recreation	743,000
Land Enhancement	2,222,000
Total	$18,607,000

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $5,000,000 and $6,900,000, respectively, will be applied as follows:

Continue Construction Stage I	72,000
Continue Construction Stage II	3,487,000
Continue Construction Stage IV	2,435,000
Initiate Construction Stage VI	267,000
Complete Construction of Recreation Support Area-East Reach	286,000
Continue Fish and Wildlife Facilities and East Reach Landscaping	2,274,000
Real Estate Management	114,000
Planning, Engineering, and Design	2,259,000
Construction Management	706,000
Total	$11,900,000

NON-FEDERAL COST: In accordance with the cost sharing and financing requirements contained in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payment During Construction and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$13,323,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project, which may be reduced for credit allowed based on prior work (Section 104 of the Water Resource Development Act of 1986) after reductions for such credit have been made in the required cash payments.	17,453,000	
Pay one-half the separable costs allocated to recreation and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities;	1,742,000	
Pay 5 percent of the costs allocated to flood control (other than non-structural measures) and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	6,429,000	177,000
Pay 25 percent of the first cost allocated to non-structural flood control measures.	1,584,000	
Pay 25 percent of the costs allocated to fish and wildlife enhancement, and pay 25 percent of the costs of operation, maintenance, repair, rehabilitation and replacement of the fish and wildlife facilities.	469,000	
Total Non-Federal	$41,000,000	$ 177,000

The non-Federal sponsor has agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The Little Calumet River Basin Development Commission is the local sponsor for the project. The Local Cooperation Agreement (LCA) was executed on August 16, 1990. The current non-Federal cost estimate of $41,000,000, which includes a cash contribution of $8,832,000, is an increase of $17,400,000 from the non-Federal cost estimate of $23,600,000 noted in the LCA, which included a cash contribution of $4,800,000. In a letter dated January 11, 1990, the non-Federal sponsor indicated that it is financially capable and willing to contribute the non-Federal share. Our analysis of the non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment. The local sponsor has received approval for Section 104 credits in the amount of $1,667,200. The State of Indiana and the Little Calumet River Basin Development Commission have invested $10 million dollars to acquire the real estate for the project.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $104,000,000 is an increase of $23,500,000 from the latest estimate ($80,500,000) presented to Congress (FY 1995). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	$ 3,522,000
Design Changes	15,716,000
Post Contract Award and Other Estimating Adjustments (Including contingency adjustments)	4,262,000
Total	$23,500,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final environmental impact statement (EIS) was filed with the United States Environmental Protection Agency on February 3, 1984. The Record of Decision was signed on July 13, 1990. Environmental Assessments (EA) were subsequently prepared addressing potential borrow and disposal sites which were not covered in the EIS and the three Findings of No Significant Impact which were signed by the District Engineer on May 9, 1990, July 11,1991 and April 21, 1992. Preparation of a supplemental environmental impact statement is underway for the levee re-alignment, excavated ponding areas and new borrow sites. The supplemental environmental impact statement is scheduled for completion in the third quarter of FY 1995.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1984. Funds to initiate construction were appropriated in FY 1990. Fish and wildlife mitigation costs for this project are estimated at $1,557,000.

APPROPRIATION TITLE: Construction, General - Local Protection Project (Flood Control)

PROJECT: Muscatine Island, Iowa (Continuing)

LOCATION: Muscatine Island lies on the west bank of the Mississippi River in Muscatine and Louisa Counties, Iowa, adjacent to the city of Muscatine, Iowa.

DESCRIPTION: Muscatine Island Levee District, the City of Muscatine, Iowa, and Muscatine-Louisa County Drainage District No. 13 form a joint drainage and flood protection area of 30,700 acres that is protected by 15.6 miles of existing sand and clay levee. The existing levee will be raised to increase the degree of protection to a 200-year flood. The project consists of improving approximately 3 miles of existing sand levee with new rock shell construction, improving approximately 3 miles of existing sand levee in kind, constructing a new panel railroad closure, improving drainage facilities, constructing ramps and approximately 600 feet of I-wall, and relocating existing utilities.

AUTHORIZATION: Water Resources Development Act of 1986 (Public Law 99-662).

REMAINING BENEFIT - REMAINING COST RATIO: 1.5 to 1 at 8 1/4 percent.

TOTAL BENEFIT-COST RATIO: 1.3 to 1 at 8 1/4 percent.

INITIAL BENEFIT-COST RATIO: 1.3 to 1 at 8 1/4 percent.

BASIS OF BENEFIT-COST RATIO: Benefits are from economic reevaluation (August 1992 price levels) included in the Revised Design Memorandum dated August 1992 as revised during the comment period and approved 19 July 1994. Current economic evaluation includes credit for freeboard range of protection provided by existing levee.

SUMMARIZED FINANCIAL DATA		
Estimated Federal Cost		$ 6,640,000
Estimated Non-Federal Cost		2,210,000
Cash Contributions	1,240,000	
Other Costs	970,000	
Total Estimated Project Cost		$8,850,000

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	0	Being Determined

Division: North Central District: Rock Island Muscatine Island, Iowa

SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 1994	$ 689,000	
Conference Allowance for FY 1995	190,000	
Allocation for FY 1995	260,000 1/	
Allocations through FY 1995	949,000	14
Allocation Requested for FY 1996	220,000	18
Programmed Balance to Complete after FY 1996	5,471,000	
Unprogrammed Balance to Complete after FY 1996	0	

PHYSICAL DATA

Relocations-Utilities $580,000

	Avg. Height	Length
Levees	1.5 feet raise	31,680 feet
Floodwalls	2 feet	600 feet

Railroad Closure: 1

1/ Reflects $30,000 reduction assigned as savings and slippage, and $100,000 reprogrammed to the project.

JUSTIFICATION: Muscatine Island Levee District and Muscatine-Louisa County Drainage District No. 13, together with the city of Muscatine, Iowa, form a joint drainage and flood protection area for 30,700 acres. The area lies on the west bank of the Mississippi River in Muscatine and Louisa Counties and is adjacent to the city of Muscatine. The existing Federal flood control project encompasses an agricultural area and a portion of the city of Muscatine. The portion of Muscatine contains the municipal water and light plant, a number of commercial and industrial establishments, dwellings, and some undeveloped fringe areas. A small airport, railroad lines, and highways also lie within the protected area. The existing project was designed and built to provide protection against a flood having a 1-percent chance of being equaled or exceeded in any given year, a 100-year flood. The design was based upon data developed in the 1940's and approved in 1954. Development of recent flood data, high costs of massive emergency operations, seepage damage, and preventive evacuation have emphasized the need for additional protection. The existing levee is overbuilt on the downstream end and consequently does not have upstream superiority. A failure in the upstream end would be catastrophic for the city of Muscatine. Industrial damage would be severe, water and power would be lost for an indefinite time, and loss of life would be possible. Flooding has frequently threatened the Muscatine Island Levee District. The Flood of 1993 was approximately a 100-year frequency flood at Muscatine and the flood of record. The levee withstood extensive seepage, however was not overtopped. During the 1965 flood, $1,196,000 ($5,670,000 in October 1993 prices) of damage was recorded for the Muscatine Island Levee District, $626,000 being flood-fighting costs and the remainder damage to crops, property, interior drainage, and other miscellaneous damages.

Average annual benefits are as follows:

ANNUAL BENEFITS	AMOUNT
Flood Control - Existing	$874,000
Flood Control - Future	61,800
Emergency Operations Savings	22,000
Total	$957,800

FISCAL YEAR 1996: The requested amount of $220,000 will be applied as follows:

Continue In-house Real Estate acquisition	$ 35,000
Planning, Engineering, and Design	$165,000
Construction Management	$ 20,000
Total	$220,000

NON-FEDERAL COST: In accordance with the cost-sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperations	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, and rights-of-way	$ 390,000	
Modify or relocate, utilities, roads, and other facilities as necessary for construction of the project	580,000	
Pay 14 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent with a minimum cash contribution of 5 percent of flood control costs and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of flood control facilities.	1,240,000	15,000
Total non-Federal First Cost	$2,210,000	

STATUS OF LOCAL COOPERATION: The project has been discussed, and the local cooperation requirements have been reviewed by potential sponsor. By letter dated 15 July 1994, the city of Muscatine, Iowa, confirmed its interest and support and expressed its willingness to participate in the project consistent with current cost-sharing policy (PL 99-662).

The local sponsor will be required to provide all lands, easements, rights-of way, modify or relocate buildings, utilities, roads, and other facilities necessary for the construction of the project, presently estimated at $970,000; make a cash contribution of $1,240,000; and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of flood control facilities, presently estimated at $15,000 annually. The Project Cooperation Agreement is scheduled for execution in May 95.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $6,640,000 is an increase of $50,000 from the latest estimate of $6,590,000 presented to Congress (FY 1995). This change includes the following items:

Item	Amount
Price Escalation on Construction Features and Inflation through the Construction Period	$ +50,000
Total	$ +50,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: During preparation of the Feasibility Report, a revised draft EIS was filed with the US EPA on 13 September 1985. The final EIS was filed with the US EPA on 23 June 1989 and the ROD signed on 10 October 1989. Section 401 Certification was received from the State of Iowa by letter dated 5 May 1986. A section 404 Public Notice was issued on 27 July 1989 and the Findings of Compliance Sections of the Section 404 (b) (1) Evaluation was signed on 30 August 1989. To address design changes developed during preparation of the Design Memorandum, an Environmental Assessment and Section 404 (b)(1) Evaluation have been prepared. The EA has been reviewed by the public. No significant impacts were identified, a Finding of No Significant Impact (FONSI) is scheduled for the District Commander's signature for December 1994.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1987. Funds to initiate construction activities were appropriated in FY 1995.

APPROPRIATION TITLE: Construction, General - Local Protection Project (Flood Control)

PROJECT: West Des Moines-Des Moines, Iowa (Continuing)

LOCATION: West Des Moines and Des Moines, Iowa, are located in Polk County in central Iowa.

DESCRIPTION: The project will provide flood protection from the Raccoon River and Walnut Creek for approximately 900 urban acres for the cities of West Des Moines and Des Moines. The protection works includes 4 miles of new or improved levee, 1,850 lineal feet of concrete floodwall, 2 pumping stations, and recreation facilities. The project provides protection against the 100-year flood, which would cause an estimated $35.9 million in damage (1993 dollars).

AUTHORIZATION: Water Resources Development Act of 1986 (Public Law 99-662).

REMAINING BENEFIT-REMAINING COST RATIO: 4.6 to 1 at 8-7/8 percent.

TOTAL BENEFIT-COST RATIO: 2.1 to 1 at 8-7/8 percent.

INITIAL BENEFIT-COST RATIO: 2.0 to 1 at 8-7/8 percent (FY 1992).

BASIS OF BENEFIT-COST RATIO: The last detailed analysis for each benefit category is contained in the Design Memorandum approved in April 1991 at July 1990 price levels.

SUMMARIZED FINANCIAL DATA			STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$15,300,000	Entire Project	25	May 1997
Estimated Non-Federal Cost		5,200,000			
Cash Contributions	1,395,000				
Other Costs	3,805,000				
Total Estimated Project Cost		$20,500,000			

SUMMARIZED FINANCIAL DATA (Continued)

		Accum. Pct. of Est. Fed. Cost
Allocations to 30 September 1994	$ 4,763,000	
Conference Allowance for FY 1995	5,070,000	
Allocation for FY 1995	3,718,000 1/	
Allocations through FY 1995	8,481,000	55
Allocation Requested for FY 1996	4,040,000	82
Programmed Balance to Complete after FY 1996	2,779,000	
Unprogrammed Balance to Complete after FY 1996	0	

PHYSICAL DATA

	Height	Length
Relocations	$ 428,000	
Levees	9 feet	20,550 feet
Floodwall	6 feet	1,850 feet

Pump Plant: 2
Closure Structures: 7
Gatewell Structures: 19
Recreation Facilities: Bicycle Path with Ramps and Vista Boat Ramp with Parking Lot

1/ Reflects $802,000 reduction assigned as Savings and Slippage, $550,000 reprogrammed from the project, and $1,166,000 in programmed carryover to FY 1996.

JUSTIFICATION: The project will provide 100-year flood protection to the cities of West Des Moines and Des Moines, Iowa, from the Raccoon River and Walnut Creek. The urban area to be protected is approximately 900 acres, which includes 227 businesses, 904 residential structures, and 11 public structures. The maximum flood of record for the Raccoon River occurred in July 1993. Other flooding on the Raccoon River occurred in June 1990, July 1986, and March 1979. The July 1993 flood was approximately a 500-year event, causing serious commercial and residential damages. The maximum flood of record for Walnut Creek (approximately a 40-year event) occurred in May 1986 causing damage to 46 businesses and 220 homes. Damages under present conditions, based on estimates obtained from city officials, were in excess of $3,000,000. The most recent flooding for Walnut Creek occurred in August 1993, July 1993, June 1990, May 1986, and August 1975.
Average annual benefits are as follows:

ANNUAL BENEFITS		AMOUNT
Flood Control - Urban		$4,305,100
Existing	3,726,100	
Future	579,000	
Recreation		82,000
Total		$4,387,100

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $4,040,000 and $1,166,000, respectively, will be applied as follows:

Complete Construction (Stage II)	$ 2,032,000
Continue Construction (Stage IIIB)	1,202,000
Real Estate Activities	15,000
Planning, Engineering, and Design	352,000
Construction Management	439,000
Total	$ 5,206,000

NON-FEDERAL COST: In accordance with the cost-sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsors must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, and rights-of-way.	$2,500,000	
Modify or relocate, utilities, highways railroads, bridges (other than railroad bridges and approaches) sewers, and other facilities. Provide road ramps, storm drainage facilities.	1,275,000	
Pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of recreation facilities.	245,000	
Pay 7 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all cost of operation, maintenance, and replacement of flood control facilities	1,180,000	$35,000
Total Non-Federal Cost	$5,200,000	$35,000

The Non-Federal sponsor has agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The Local Cooperation Agreement was signed by Assistant Secretary of Army for Civil Works in August 1992. The current non-Federal cost estimate of $5,200,000 has not changed. Our analysis of the non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $15,300,000 is an increase of $100,000 over the latest estimate ($15,200,000) presented to Congress (FY 1995). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	$-117,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	+217,000
Total	$+100,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement (FEIS) was filed with the EPA on 20 July 1979. Supplement No. 1 to the FEIS was prepared for the General Reevaluation Report (GRR) with the draft filed on 7 April 1989, the final filed on 20 October 1989 and the ROD signed on 22 July 1990. During the preparation of the GRR no aspects of the project design which required processing under Sections 401 or 404 of the Clean Water Act were identified. An Environmental Assessment (EA) has been prepared to address design changes during the preparation of the Design Memorandum (DM). A Finding of No Significant Impact (FONSI) for this EA was signed on 13 November 1991. No design changes identified in the DM will require processing under Section 401 or 404 of the Clean Water Act.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1987. Funds to initiate construction were appropriated in FY 1992.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Chaska, Minnesota (Continuing)

LOCATION: Chaska is located in Carver County in south-central Minnesota on the Minnesota River, a tributary of the Mississippi River.

DESCRIPTION: The plan for flood control at Chaska, Minnesota, consists of a levee and interior drainage works along the Minnesota River, flood diversion channels on Chaska Creek and East Creek, and appropriate floodplain regulation measures.

AUTHORIZATION: Water Resources Development Act of 1976 (Public Law 94-587).

REMAINING BENEFIT-REMAINING COST RATIO: 2.6 to 1 at 8 7/8 percent.

TOTAL BENEFIT-COST RATIO: 0.78 to 1 at 8 7/8 percent.

INITIAL BENEFIT-COST RATIO: 1.05 to 1 at 8 7/8 percent (FY 1988).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation approved in February 1984 at October 1983 price levels.

SUMMARIZED FINANCIAL DATA			Accum. Pct. of Est. Fed. Cost
Estimated Federal Cost		$29,600,000	
Estimated Non-Federal Cost		12,700,000	
Cash Contribution	$ 2,212,000		
Other	10,488,000		
Total Estimated Project Cost		$42,300,000	
Allocations to 30 September 1994		21,957,000	
Conference Allowance for FY 1995		2,500,000	
Allocation for FY 1995		2,104,000 1/	
Allocations through FY 1995		24,061,000	81
Allocation Requested for FY 1996		3,740,000	94
Programmed Balance to Complete after FY 1996		1,799,000	
Unprogrammed Balance to Complete after FY 1996		0	

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	69	Dec 1996

1/Reflects $396,000 reduction assigned as savings and slippage.

Division: North Central District: St. Paul Chaska, Minnesota

PHYSICAL DATA

Fish and Wildlife Facilities:
Chaska Lake moist soil unit with Chaska Lake control structure.

Channels:

Diversion Channel	8,800 feet
Channel Improvement	1,500 feet

Levees:

New Levee	7,800 feet
Levee Improvement	5,800 feet

Pumping Plant:

Pumping Station	1

Recreation Facilities:

Recreation Trails	2.9 miles

JUSTIFICATION: The floodplain at Chaska consists of approximately 390 acres behind the existing Minnesota River levee and along Chaska and East Creeks. Over 540 residences, 47 businesses and industries, three public buildings, the city water supply and sanitary system, streets, roads, and public utilities are directly affected by flooding of the two creeks and the Minnesota River. Potential floods pose severe threats to the lives and security of the residents of Chaska. Run-off from snowmelt has caused two major floods in the past 28 years. In the spring of 1965, the flood of record caused damages estimated at $1,957,000. In 1969, another severe spring flood caused damages estimated at $1,088,000. Under current conditions and prices and without a successful flood fight, floods similar to those in 1965 and 1969 could cause damages estimated at $12,753,000 and $5,413,000, respectively. The proposed project would provide flood protection against a flood having an occurrence interval of about once in 100 years. This project would address flood control and recreational needs of this suburban metropolitan community. The average annual benefits are as follows:

Annual Benefits	Amount
Flood Control	$2,232,000
Recreation	28,000
Total	$2,260,000

FISCAL YEAR 1996: The requested amount of $3,740,000 will be applied as follows:

Continue construction of Stage 3 Improvements	3,425,000
Real Estate Activities	3,000
Planning, Engineering, and Design	88,000
Construction Management	224,000
Total	$3,740,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, and rights-of-way, and dredged material disposal areas.	$ 4,526,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	5,962,000	
Pay one-half of the separable costs allocated to recreation, and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of recreation facilities.	154,000	$ 2,600
Pay 5 percent of the costs allocated to flood control in cash and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	2,058,000	33,700
Total Non-Federal Costs	$12,700,000	$36,300

The non-Federal sponsor has agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The Local Cooperation Agreement was executed on 12 September 1988. The current non-Federal cost estimate of $12,700,000, which includes a cash contribution of $2,212,000, is an increase of $5,370,000 from the non-Federal cost estimate of $7,330,000 noted in the LCA, which included a cash contribution of $2,497,000. The non-Federal sponsor has sold $3,915,000 worth of bonds, has applied for a grant from the Small Cities Development Program and expects financial assistance from the Minnesota Department of Natural Resources. The non-Federal sponsor is financially capable and willing to contribute the increased non-Federal share.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $29,600,000 is a decrease of $1,100,000 from the latest estimate ($30,700,000) presented to Congress (FY 1995). This change includes the following:

Item	Change
Price Escalation	$ -497,000
Design Changes	-2,053,000
Post Contract Award and Other Estimating Adjustments (Including contingency adjustments)	+1,450,000
Total	$-1,100,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Impact Statement (EIS) was filed with the Council on Environmental Quality in October 1976. An EIS Supplement to address provisions of the Clean Water Act has been prepared to accompany the Limited Reevaluation Report. The draft EIS Supplement was filed with the Environmental Protection Agency (EPA) on 21 May 1982. The Final Supplement was filed on 8 October 1982. A draft EIS Supplement No. 2, to address the change in location of the East Creek Diversion was prepared to accompany the General Design Memorandum and was filed with EPA in September 1984. The Final EIS for Supplement No. 2 was filed in May 1985.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1978. Funds to initiate construction were appropriated in FY 1988.

APPROPRIATION TITLE: Construction, General-Local Protection (Flood Control)

PROJECT: Sheyenne River, North Dakota (Continuing)

LOCATION: The project is located in southeastern North Dakota along the Sheyenne River, from near Baldhill Dam downstream to the confluence with the Red River of the North. Parts of Griggs, Barnes, Ransom, Richland and Cass Counties are included in the project area.

DESCRIPTION: The project, as authorized, consists of (1) 12.7 miles of levee and a 6.8-mile flood diversion channel at West Fargo, (2) 7.4 miles of flood diversion channel and 14.8 miles of levees from Horace to West Fargo, (3) a 5-foot raise of the Baldhill Dam flood control pool, and (4) a dam and reservoir with approximately 35,000 acre-feet of storage for flood control on the Maple River. The plan, excluding the Maple River dam, would remove about 2,000 residences and farmsteads from the 100-year floodplain and reduce flood damages on more than 50,000 acres of agricultural land. Estimated damages caused by a one percent chance flood are $109 million. On an average annual basis, over $28 million in flood damages are estimated in the basin. Most of these damages occur in the West Fargo urban area.

Construction includes the West Fargo Unit ($13,700,000 Federal and $7,900,000 Non-Federal), the Horace to West Fargo Unit ($6,500,000 Federal and $2,200,000 Non-Federal), and the Baldhill Dam Unit ($11,600,000 Federal and $6,500,000 Non-Federal).

The Maple River Reservoir Unit has been deleted from the project due to lack of economic justification.

AUTHORIZATION: Water Resources Development Act of 1986 (Public Law 99-662).

REMAINING BENEFIT-REMAINING COST RATIO: 1.3 to 1 at 8 5/8 percent.

TOTAL BENEFIT-COST RATIO: 6.7 to 1 at 8 5/8 percent.

INITIAL BENEFIT-COST RATIO: 6.1 to 1 at 8 5/8 percent (FY 1989).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation (General Design Memorandum) dated March 1987 at October 1986 price levels.

SUMMARIZED FINANCIAL DATA

			Accum. Pct. of Est. Fed. Cost.
Estimated Federal Cost		$31,800,000	
Estimated Non-Federal Cost		16,600,000	
Cash Contributions	2,420,000		
Other Costs	14,180,000		
Total Estimated Project Cost		48,400,000 1/	
Allocations to 30 September 1994		20,753,000 2/	
Conference Allowance for FY 1995		530,000	
Allocation for FY 1995		446,000 3/	
Allocations through FY 1995		21,199,000	67
Allocation Requested for FY 1996		500,000	69
Programmed Balance to Complete After FY 1996		10,101,000	
Unprogrammed Balance to Complete after FY 1996		0	

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
West Fargo Unit	100	Sep 1993
Horace to West Fargo Unit	100	Aug 1992
Baldhill Dam Unit	0	Being
Total Project	64	Determined

1/ Excludes all costs associated with the Maple River Unit. The Maple River Unit has been reclassified as "inactive" due to lack of economic justification.

2/ Excludes $475,000 sunk cost for the Maple River Unit.

3/ Reflects $84,000 reduction assigned as savings and slippage.

PHYSICAL DATA

WEST FARGO UNIT:	
Earthen Levee	12.7 miles
Flood Diversion Channel	6.8 miles
BALDHILL DAM UNIT:	
Flood Control Pool Raise (by modifications to gates - not embankment)	5-foot raise

HORACE TO WEST FARGO UNIT:	
Trapezoidal Excavated Channel	7.4 miles
Earthen levees	14.8 miles

DIVISION: North Central

DISTRICT: St. Paul

Sheyenne River, North Dakota

6 FEBRUARY 1995

JUSTIFICATION: The Sheyenne River, located in the southeastern portion of North Dakota, drains 7,140 square miles into the Red River of the North which flows northward to Lake Winnipeg in Manitoba, Canada. Recurrent flooding causes serious damage at the communities of Valley City, Lisbon, and West Fargo, and along the Sheyenne River. High Sheyenne River flows also aggravate downstream flooding along the Red River of the North. The maximum flood of record in 1882 inundated much of Valley City and Kindred. Over 100,000 acres of cropland in the basin were flooded by the Red River of the North and the Sheyenne, Wild Rice, and Maple Rivers. On 5 July 1975, the flood in the Sheyenne River basin crested at Kindred within 0.3 foot of the record flood, and the crest at West Fargo set a new record. Actual flood damages for this flood were $96,762,000 of which $2,132,000 were urban and $94,630,000 were rural. Urban flood damages of $14,159,000 were prevented due to emergency levee protection. The rural damages include cross-country (sheet flow) as well as over-bank flooding. In 1979, the Sheyenne River at West Fargo reached a flow of 3,500 cfs and a stage .03 foot less than the 1975 summer flood. Damages including the cost of successful flood fights were $7,388,000, of which $1,903,000 were urban, $4,676,000 agricultural, and $809,000 transportation. In July and August 1993, intense rainstorms over the Sheyenne, Maple and Rush River watersheds caused flood damages in many areas. In Valley City, an estimated $3 million in flood damages were incurred. In the Harwood area, just downstream from the West Fargo levees and diversion project, widespread agricultural and rural residential damages were sustained. Both the Horace and the West Fargo levees and diversion projects prevented substantial damages ($8 million and $36 million respectively) in their first year of operation. The average annual flood damages for the Sheyenne River basin from over-bank flooding over an assumed 100-year period at October 1994 price levels are estimated at $39,905,061, of which $37,506,749 are urban, $2,053,546 agricultural and $344,766 transportation. The recommended improvements will protect about 2,000 residences and farmsteads in the 100-year floodplain and reduce flood damages on over 50,000 acres of agricultural land. The average annual flood control benefits are $22,374,600.

FISCAL YEAR 1996: The requested amount of $500,000 will be applied as follows:

BALDHILL DAM UNIT (Pool Raise):

Lands and Damages	$ 40,000
Continue Planning, Engineering and Design	460,000
Total	$ 500,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Cost
Provide lands, easements, rights-of-way, and dredged material disposal areas.	$ 7,936,000	
Modify or relocate utilities, roads, bridges, (except railroad bridges), and other facilities, where necessary for the construction of the project.	6,244,000	
Pay 5 percent of the costs allocated to flood control in cash and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of flood control facilities.	2,420,000	$70,800
Total Non-Federal First Cost	$16,600,000	

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The Southeast Cass Water Resource District is the local sponsor for the West Fargo Unit and the Horace to West Fargo Unit. The LCA for the West Fargo Unit was executed on 25 July 1988. The LCA for the Horace Unit was executed on 6 March 1990. Both of these units are complete. In April 1994, the Sheyenne River Joint Water Resource District (WRD) was formed to act as the non-Federal sponsor for the flood control pool raise at the Baldhill Dam. The Joint WRD consists of eight member water resource districts, including both upstream and downstream representatives. Coordination is being conducted with the Joint WRD and with the North Dakota State Water Commission concerning a firm commitment to sponsorship of the flood pool raise. This will be addressed in the preparation of the GDM supplement that is now underway.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $31,800,000 is an increase of $110,000 from the latest estimate ($31,690,000 1/) presented to Congress (FY 1995). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	$-140,000
Post Contract Award and other Estimating Adjustments (including contingency adjustments)	+250,000
Total	$+110,000

1/ Excludes cost for the Maple River Reservoir Unit which has been reclassified to inactive status.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Draft Environmental Impact Statement was filed with the Environmental Protection Agency (EPA) on 28 May 1982. The final statement was filed with the EPA on 13 April 1984. The Record of Decision was signed on 6 June 1987.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1976 and funds to initiate construction were appropriated in FY 1990. No State or Federal agency expressed opposition to the project. However, a significant amount of opposition to the raise of the Baldhill Dam flood control pool was expressed by property owners around the lake, especially at the upper end of the lake. Much of the opposition expressed came from individuals and churches associated with the Cooperstown Bible Camp, a portion of which was identified to be purchased as a part of the raise of the flood pool, and from the Association for the Preservation of the Sheyenne River Valley which represents primarily landowners around and upstream of Lake Ashtabula. Several counties adjacent to and in the vicinity of Baldhill Dam have also expressed opposition to the raise of the flood control pool primarily because private property is to be acquired for the project. In November 1990, the International Coalition for Land and Water Stewardship in the Red River Basin adopted a position supporting the raise of the flood control pool at the Baldhill Dam as recommended in the authorizing document. This expression of basin-wide support included representatives from the affected property owners. Based on this support, the necessary additional engineering studies are being initiated. The formation of the Sheyenne River Joint Water Resource District to act as the non-Federal sponsor of the flood control pool raise is helping to improve communications between the downstream benefiting interests and the upstream interests who perceive themselves as adversely affected.

APPROPRIATION TITLE: Construction, General - Reservoirs (Flood Control)

PROJECT: Souris River Basin, North Dakota (Continuing)

LOCATION: On the Souris River in Ward, Renville, McHenry and Bottineau Counties in northwestern North Dakota and purchased flood control storage in Saskatchewan, Canada. The existing Lake Darling Dam, is located about 20 miles northwest of Minot, North Dakota. The project also includes features at the communities of Sawyer and Velva and at various locations along the 358-mile U.S. portion of the Souris River.

DESCRIPTION: The work under the current plan consists of purchased storage at two reservoirs in Saskatchewan, Canada (known as the Rafferty and Alameda projects); a modified outflow structure and dam safety improvements at Lake Darling Dam; a flood warning system; levee improvements at Sawyer, Renville County Park, and six subdivisions from Burlington to Minot, flood proofing of about 90 rural homes in the basin and the purchase of flowage easements in rural areas; modifications to dams 87 and 96 in the Upper Souris National Wildlife Refuge; and modifications to dams 320, 326, 332, 341 and 357 in the J. Clark Salyer National Wildlife Refuge. Channel and levee improvement work at Velva, North Dakota, is complete.

AUTHORIZATION: Water Resources Development Acts of 1986 (Public Law 99-662) and 1992 (Public Law 102-580).

REMAINING BENEFIT-REMAINING COST RATIO: 18.2 to 1 at 5 1/8 percent.

TOTAL BENEFIT-COST RATIO: 1.4 to 1 at 5 1/8 percent.

INITIAL BENEFIT-COST RATIO: 2.6 to 1 at 5 1/8 percent (FY 1982).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation as presented in the General Plan Report, dated July 1988 at October 1985 price levels.

SUMMARIZED FINANCIAL DATA

			Accum. Pct. of Est. Fed. Cost
Estimated Federal Cost		$113,300,000	
Corps of Engineers	$105,370,000		
Other Federal Agency	7,930,000		
Estimated Non-Federal Cost		8,180,000	
Cash Contribution	$ 5,740,000		
Other	2,440,000		
Total Estimated Project Cost		$121,480,000	
Allocations to 30 September 1994		$100,941,000	
Conference Allowance for FY 1995		3,500,000	
Allocation for FY 1995		2,946,000 1/	
Allocations through FY 1995		103,887,000	99
Allocation Requested for FY 1996		0	99
Programmed Balance to Complete after FY 1996		1,483,000	
Unprogrammed Balance to Complete after FY 1996		0	

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Velva Unit	100	Aug 1988
Reservoirs Unit	100	Oct 1997
Rafferty Dam	100	Dec 1991
Alameda Dam	100	Dec 1994
U.S. features	80	Oct 1997
Entire Project	88	Oct 1997

1/ Reflects $554,000 reduction assigned as savings and slippage, and $2,800,000 programmed unobligated carryover to FY 1996.

PHYSICAL DATA

Flood Control Storage in Saskatchewan (for 100-yr flood):

Rafferty Dam -	265,200 acre-feet
Alameda Dam -	112,600 acre-feet

Flood Control Storage in the United States:

Existing Lake Darling Dam - 105,600 acre-feet

Downstream Improvements:

Levees (Community):	8.1 miles
Channels	4.5 miles
Pumping Plants:	7
Rural Floodproofing	90 homes
Easements	4,000 acres

JUSTIFICATION: Large floods originating primarily from snowmelt in the Canadian portion of the Souris River basin cause extensive damages and much human suffering and hardship in the basin. In 1980, the population of the entire Souris River basin in the United States totaled 95,000. The major population center in the basin is Minot, with a 1980 census of 32,886. Since 1936, Lake Darling Reservoir, operated by the U.S. Fish and Wildlife Service, has reduced flood damages by controlling several small floods. Because only minor floods occurred during an extended period following construction of the Lake Darling Dam, the problem of flooding became a matter of little concern for interests in the vicinity of Minot and numerous residential and commercial developments were constructed in the Souris River floodplain. The 1969 spring flood (25-year flood) greatly exceeded the available flood storage capacity of Lake Darling and caused damages, including flood-fight costs of about $10,900,000 at Minot and about $1,600,000 in the remainder of the Souris Valley. Without emergency measures, damages would have reached $19,300,000 in Minot. The flood inundated 3,000 homes and required evacuation of nearly 11,800 persons, approximately one-third of the population of Minot causing much human hardship. Again in 1970, heavy mid-April snowstorms created a serious flood threat. Through advance flood forecasts and timely actions generally in accordance with a flood emergency plan, a potential flood disaster in the Souris River Valley was averted. Nevertheless, urban and rural damages amounted to $2,700,000 including all flood fight costs. Damages without a flood fight would have amounted to $4,600,000. Another significant flood occurred in April 1976 (75 year flood) causing actual urban and agricultural damages of $15,300,000 including $6,500,000 for flood fight and cleanup costs at urban locations. The most recent flood occurred in May 1979. Damages for the main stem totaled $1,600,000. Damages prevented by emergency work amounted to $2,000,000. The Minot Channel Project prevented damages of $40,900,000. Estimated damages if equivalent floods occurred at the present time without the project in operation and without a flood fight would amount to about $97,050,000 for the 1969 flood, $22,617,000 for the 1970 flood, $95,311,000 for the 1975 flood, $184,237,000 for the 1976 flood, and $97,050,000 for the 1979 flood. Construction of the project will substantially reduce these damages. The average annual damages without the project are $11,121,000 compared to $3,860,000 with the project. The project includes work in Renville, Ward, McHenry and Bottineau Counties in North Dakota. Renville and McHenry Counties have been designated as redevelopment areas under Title IV of the Public Works and Economic Development Act of 1965 (Public Law 89-136).

The average annual benefits are as follows:

Annual Benefits	Amount
Flood Control	$6,909,000
Future Capital Cost-Savings	236,000
Total	$7,145,000

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $0 and $2,800,000, respectively, will be applied as follows:

Construction-Refuge Structures (Lake Darling Dam Flood Control, Dam Safety & Mitigation)	$1,258,000
Flood Warning System	627,000
Planning, Engineering, and Design	540,000
Construction Management	375,000
Total	$2,800,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, and rights-of-way, and dredged material disposal areas.	$1,542,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	556,000	
Provide 20 percent of total non-structural flood proofing costs for rural improvements.	342,000	
Pay 25 percent of the contribution to Canada which is in excess of $23,600,000 (adjusted per Section 105 of P.L. 100-202) for the Alameda and Rafferty Dams and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of the Burlington to Minot, Velva, Sawyer and Renville County Park levee improvements; the flood warning system, and the floodproofing of homes.	5,740,000	$58,000
Total Non-Federal Cost	$8,180,000	$58,000

The non-Federal sponsor has agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: By resolution dated 19 June 1969, the Ward County Water Management Board agreed to sponsor a channel improvement project at Minot and meet the local cooperation requirements for an overall flood protection plan. When the Lake Darling project was authorized, there was a recognized need for a joint board representing the counties affected by the project to serve as local sponsor. On 6 June 1983, the representatives of the water resource districts from Ward, Renville, McHenry, and Bottineau Counties and the Oak Creek drainage area agreed to become members of a Souris River Joint Water Resource Board for flood control, which would serve as local sponsor for the project. The Secretary of the Army recommended separating the Velva feature from the rest of the Lake Darling project, and a separate local cooperation agreement was signed on 20 November 1984. In August 1985, the Souris River Joint Water Resource Board provided a letter of intent to serve as the local sponsor for participation in the Souris River basin project. The local cooperation agreement for the remainder of the authorized project was signed on 24 October 1989. The local cooperation agreement was modified on 4 November 1992 to give the local sponsor credit for accomplishing "house raises" associated with nonstructural flood control project features.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $113,300,000 is a decrease of $7,100,000 from the latest estimate ($120,400,000) presented to Congress (FY 1995). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	$ -1,706,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	-5,394,000
Total	$ -7,100,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Impact Statement (EIS) reporting requirements were accomplished using the tiering principle. Initially, a generic (programmatic) EIS, showing basin-wide impacts of the project, and also including site specific documentation for the Velva levee feature, was prepared. This was followed by a site specific EIS for the 4-foot raise of the Lake Darling Dam design pool. The initial Draft Environmental Impact Statement was submitted to the Environmental Protection Agency and distributed for public review in October 1982. The final generic/Velva EIS was filed on 24 February 1984. The final Feature Environmental Impact Statement (Lake Darling Dam 4-foot raise) was filed on 14 February 1986. The Record of Decision (ROD) for the proposed 4-foot raise of Lake Darling and the related features was issued on 30 June 1986. A draft Environmental Impact Statement for the project as authorized by the Water Resources Development Act of 1986 (purchase of flood storage in Canada) was submitted to the Environmental Protection Agency on 16 November 1987. The final document was submitted to the Environmental Protection Agency in July 1988. Public Review of the document was completed in August 1988. The ROD and U.S. Fish and Wildlife Service Certificate of Compatibility were signed in October 1989.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1970. Funds to initiate construction were appropriated in FY 1982.

The Lake Darling/Souris River Basin project is the second phase of the total flood control plan for the Souris Valley in North Dakota. The channel modification in Minot, which was authorized in the summer of 1970 and completed in 1979, was the first phase of construction. The Burlington Dam project was previously authorized as the second phase of the flood control plan in December 1970. However, due to the controversial nature of the Burlington Dam project, a scaled-down project was pursued by local interests. The resulting action was the authorization in the 1982 Energy and Water Development Appropriations Act, Public Law 97-88, to raise the pool at Lake Darling by approximately 4 feet and to implement upstream and downstream flood control measures. Features of this project were also included in the Burlington Dam plan; however, the Burlington Dam and Des Lacs River Diversion improvements have now been placed in a deferred status (the Senate Committee directed that the Corps take no further action to construct Burlington Dam until expressly directed to do so by the Committee). The Water Resources Development Act of 1986 authorized the Secretary of the Army to financially participate in the construction of Canadian reservoir projects providing flood control in the Souris River Basin. It also deauthorizes the construction of Burlington Dam and modifications at Lake Darling Dam to raise the level of the dam when the dam or dams in Canada are completed.

Construction of the Rafferty Dam was initiated in February 1988. An agreement between the Government of Canada and the Government of the United States of America for water supply and flood control in the Souris River Basin was signed on 26 October 1989. Rafferty Dam was physically complete in September 1991.

Construction on Alameda Dam was initiated in November 1990, and was substantially complete in November 1994. U.S. payments to Canada total approximately $52.8 million thru September 1994.

The Memorandum of Understanding between the Department of the Interior and the Department of the Army regarding project work in the Upper Souris and J. Clark Salyer National Wildlife Refuges was completed and signed on 2 June 1989. A Memorandum of Understanding between the U.S. Fish and Wildlife Service and the Corps of Engineers for work at Lake Darling Dam was executed on 30 March 1993.

APPROPRIATION TITLE: Construction General - Reservoirs (Dam Safety Assurance)

PROJECT: Homme Dam, North Dakota (Dam Safety)(Continuing)

LOCATION: Homme Dam is located in Walsh County in northeastern North Dakota, about two miles west of the city of Park River. The dam is on the South Branch of the Park River, at river mile 62.1 above the main stem's confluence with the Red River of the North. The drainage area above Homme Dam is 226 square miles.

DESCRIPTION: The three principle features of the dam are: (1) a compacted, earth-filled embankment; (2) a reinforced concrete flat-crested spillway and stilling basin located on the right abutment of the reservoir; and (3) a sluicegated reinforced concrete control tower conduit and outlet works used to release low flows from the reservoir.

AUTHORIZATION: Flood Control Act of 1944.

REMAINING BENEFIT-REMAINING COST RATIO: No detailed economic analysis has been performed on this project.

TOTAL BENEFIT-COST RATIO: No detailed economic analysis has been performed on this project.

INITIAL BENEFIT-COST RATIO: No detailed economic analysis has been performed on this project.

BASIS OF BENEFIT-COST RATIO: No detailed economic analysis has been performed on this project.

SUMMARIZED FINANCIAL DATA

Original Project		
Actual Federal Cost		$ 1,313,300
Non-Federal Cost		62,800
Cash Contribution	$ 56,220	
Other	6,580	
Total Original Project Cost		$ 1,376,100

SUMMARIZED FINANCIAL DATA (Continued)

		Accum. Pct. of Est. Fed. Cost
Estimated Federal Cost	$ 8,230,000	
Estimated Non-Federal Cost	56,000	
Total Estimated Project Cost	$ 8,286,000	
Allocations to 30 September 1994	$ 0	
Conference Allowance for FY 1995	0	
Allocation for FY 1995	290,000 1/	
Allocations through FY 1995	290,000	4
Allocation Requested for FY 1996	200,000	6
Programmed Balance to Complete after FY 1996	7,740,000	
Unprogrammed Balance to Complete after FY 1996	0	

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	0	Being Determined

1/ Reflects $290,000 reprogrammed to the project.

JUSTIFICATION: This site has been identified as having inadequate spillway capacity that would result in the dam embankment being overtopped by about 2.3 feet during the probable maximum flood. The potential for loss of life associated with the probable maximum flood suggests that the dam needs modification.

FISCAL YEAR 1996: The requested amount of $200,000 will be applied as follows:

Continue planning, engineering, and design	$ 200,000
Total	$ 200,000

NON-FEDERAL COST: The local sponsor share is estimated to be $56,000.

STATUS OF LOCAL COOPERATION: The Project Cooperation Agreement is scheduled to be executed in FY 1996. The local sponsors for the original project were Park River and Grafton, North Dakota. Coordination has taken place with those two cities as well as the North Dakota Water Commission, Walsh county and the township.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $8,200,000 is the initial estimate presented to the Congress.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Initial coordination has been completed with the North Dakota Department of Game and Fish and the U.S. Fish and Wildlife Service. Coordination will continue with these agencies and with the North Dakota Preservation Officer during the next study phase. The required NEPA environmental documentation will be included in the General Design Memorandum.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were provided in FY 1993. The Homme Lake Dam Safety reconnaissance report was approved 25 August 1994.

APPROPRIATION TITLE: Construction, General - Flood Control Projects (Dam Safety Assurance)

PROJECT: Lake Ashtabula and Baldhill Dam, North Dakota (Dam Safety)(Continuing)

LOCATION: Baldhill Dam and Reservoir (Lake Ashtabula) are located in eastern North Dakota, about 75 miles west of Fargo and 9 miles northwest of Valley City. The dam is on the Sheyenne River, about 271 river miles upstream of the confluence of the Sheyenne River with the Red River of the North near Fargo. Flood control, water supply, pollution abatement, and recreation are the primary purposes of this project.

DESCRIPTION: The existing earthfill dam is 1,650 feet long and includes a concrete spillway section with three tainter gates. The impoundment capacity is 68,600 acre-feet. The 1982 reconnaissance study and the 1986 risk assessment study found that the existing spillway is not capable of handling a PMF (probable maximum flood). A general design memorandum completed in January 1987 recommended constructing an auxiliary spillway on the left abutment, retaining the existing spillway on the right abutment, constructing a 5-foot concrete parapet wall on top of the dam embankment, and stabilizing the slope on the right abutment. A subsequent value engineering study recommended the auxiliary spillway be ungated and be placed over the existing embankment instead of gated and in the left abutment. This value engineered plan is described in Supplement 1 to General Design Memorandum, Baldhill Dam and Reservoir, dated December 1988. The Feature Design Memorandum on the ungated auxiliary spillway and repair of the existing gated spillway was prepared in April 1993. The revised auxiliary spillway comprises an 880 foot wide broad crest weir located in an excavated section of the dam embankment, a downstream flexible slab, and a rigid chute and downstream apron. Repairs to the existing spillway are also recommended. The ungated auxiliary spillway work will be accomplished under the Dam Safety authority. The repair of the existing spillway will be accomplished under both the Dam Safety and the Major Rehabilitation authorities.

AUTHORIZATION: Flood Control Act of 1944.

REMAINING BENEFIT-REMAINING COST RATIO: 3.4 to 1 at 8 1/2 percent.

TOTAL BENEFIT-COST RATIO: 2.2 to 1 at 8 1/2 percent.

INITIAL BENEFIT-COST RATIO: 1.3 to 1 at 8 1/2 percent (FY 1988).

BASIS OF BENEFIT-COST RATIO: The benefit-cost ratio is based on current cost estimates as presented in the April 1993 Feature Design Memorandum which have been deflated to October 1986 price levels, and benefits as presented in Supplement 1 to GDM for Baldhill Dam and Reservoir, dated December 1988. The cost estimates used are the total of both the Dam Safety and the Major Rehabilitation work.

SUMMARIZED FINANCIAL DATA

Original Project

Actual Federal Cost		$ 2,652,800
Non-Federal Cost		208,000
Cash Contribution	$ 208,000	
Total Original Project Cost		$ 2,860,800

		Accum. Pct. of Est. Fed. Cost
Estimated Federal Cost (Dam Safety)	$18,000,000	
Estimated Non-Federal Cost	319,000	
Total Estimated Project Cost	$18,319,000 1/	
Allocations to 30 September 1994	$4,025,000	
Conference Allowance for FY 1995	2,900,000	
Allocation for FY 1995	7,392,000 2/	
Allocations through FY 1995	11,417,000	64
Allocation Requested for FY 1996	4,700,000	90
Programmed Balance to Complete after FY 1996	1,883,000	
Unprogrammed Balance to Complete after FY 1996	0	

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	22	Being Determined

PHYSICAL DATA

Dams

Spillway (ungated auxiliary)	880 LF (crest)

1/ The estimated total project cost for both the Major Rehabilitation and the Dam Safety work is $24,599,000. Funding for the project under Major Rehabilitation should be accomplished concurrently with the Dam Safety funding.

2/ Reflects $459,000 reduction assigned as savings and slippage, $4,951,000 reprogrammed to the project, and $3,900,000 programmed carryover into FY 96.

JUSTIFICATION: In 1892, 1897, 1916 and 1919, the Sheyenne River overflowed its banks causing significant damage. During the 1930's, the basin experienced a serious drought and many river towns lost their water supplies. Caught between these two extremes in water levels, the residents of the basin asked for help. A flood control and water supply project was proposed. Baldhill Dam was constructed and formally dedicated on September 21, 1952. Baldhill Dam has been classified as a large, high hazard dam according to the criteria and guidelines established by the National Program for the Inspection of Dams. The dam is in a long, narrow valley above Valley City, North Dakota (1980 population - 7,771). The dam was designed to create an impoundment with a capacity of 68,600 acre-feet to control runoff from an effective drainage area of 1,988 square miles. It provides a substantial degree of flood control to the cities, villages, and urban areas along the Sheyenne River below the dam. In its present condition, Baldhill Dam has inadequate spillway capacity to pass the probable maximum flood (PMF) and is therefore subject to overtopping. The existing spillway has a capacity of only 43,100 cfs. The capacity needed to pass the PMF is 126,000 cfs. Overtopping endangers the integrity of the embankment at extremely high flows. If the dam failed, a very destructive surge of water would rush down the valley taking about 4 to 6 hours to reach Valley City. At its worst, the flood would inundate about 75 percent of Valley City to some extent, including many of the facilities normally available for emergency shelter. The proposed plan is to construct an auxiliary spillway which will provide the additional discharge capacity required to pass the PMF and to repair the existing gated spillway to make it reliable for passing the original design flows as well as a portion of the higher flows of the revised PMF.

Annual Benefits	Amount
Flood Control	$1,620,700
Recreation	1,483,000
Water Supply	1,689,000
Total	$4,792,700

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $4,700,000 and $3,900,000, respectively, will be applied as follows:

Continue construction of Spillway	$7,855,000
Planning, Engineering and Design	425,000
Construction Management	320,000
Total	$8,600,000

NON-FEDERAL COST: Consistent with the cost-sharing guidelines for Dam safety projects local interests will be required to make a cash contribution of 15 percent of the dam safety modification costs in accordance with the cost sharing for the project at the time of initial project construction. This results in a non-Federal share of 1.744% of the total Dam Safety cost presently estimated at $319,000.

STATUS OF LOCAL COOPERATION: On 14 January 1994 a PCA was executed, with the North Dakota State Water Commission agreeing to be the project sponsor for the Dam safety modifications. The current non-Federal cost estimate of $319,000 is the same as the non-Federal estimate noted in the PCA.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate for the dam safety work of $18,000,000 is the same as the latest estimate ($18,000,000) presented to Congress (FY 1995). The current Federal cost estimate for the total dam safety assurance portion and major rehabilitation work is $24,280,000. The major rehabilitation work is being funded under the major rehabilitation authorities.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS on the GDM was filed with EPA on 5 August 1988. The Record of Decision for the Final EIS on the GDM was signed on 25 April 1989. An Environmental Assessment for the GDM Supplement was prepared in December 1988. A Finding of No Significant Impact on the GDM Supplement was signed on 21 November 1989.

OTHER INFORMATION: The recommended overall plan for major rehabilitation and dam safety is to increase the spillway capacity at Baldhill Dam to provide the capability of discharging PMF (Probable Maximum Flood) flows. This will be accomplished by constructing an 880 foot long auxiliary ungated broad crest weir spillway located in an excavated section of the dam embankment, including a downstream flexible slab and a rigid chute and downstream apron, and the repair and modification of the existing gated spillway. The dam safety and the major rehabilitation modifications are both integral parts of the total package and need to be funded, designed, and constructed as one unit.

A risk assessment report was prepared in June 1986 to investigate the potential impacts that a range of floods would have on the hydrologic/hydraulic capability of Baldhill Dam. The report indicated that there is a serious spillway discharge capacity deficiency, and recommended increasing discharge capacity by constructing an auxiliary spillway to supplement the existing spillway. The report was approved by the Assistant Secretary of the Army, Civil Works in November 1987.

In a separate action, the Corps of Engineers is evaluating a reservoir flood control pool raise of 5 feet as a component of the Sheyenne River Flood Control project. The recommended alternative being considered for dam safety and major rehabilitation modifications will not preclude the ability to modify the dam for the authorized flood control purpose in the future. The recommended dam safety and major rehabilitation modifications are compatible with the flood control features. However, past coordination meetings over the period 1982 through 1993 with the NDSWC (North Dakota State Water Commission) and local residents indicated some opposition to raising the dam for flood control. Accordingly, flood control features of the Sheyenne River Flood Control project are not being included as part of the dam safety project. However, in April 1994, a Joint Water Resource District, comprised of eight member Water Resource Districts along the Sheyenne River, was formed to be the local sponsor for the raise of the flood control pool at Baldhill Dam. Additional coordination is being conducted with the NDSWC and the Joint Water Resource District on the flood pool raise.

APPROPRIATION TITLE: Construction, General - Major Rehabilitation - Locks and Dams (Navigation)

PROJECT: Four Locks, Illinois Waterway, Illinois (Major Rehab)(Continuing)

LOCATION: The project locations are as follows:

PROJECT	RIVER MILES ABOVE MISSISSIPPI RIVER CONFLUENCE	CITY OR VILLAGE	COUNTY
Brandon Road Lock	286.0	Downstream of Joliet	Will
Dresden Island Lock	271.5	Upstream of Morris	Grundy
Marseilles Lock	244.6	Downstream of Marseilles	LaSalle
Lockport Lock	291.1	Downstream of Lockport	Will

The facilities are units of the Illinois Waterway Navigation System. There are eight such facilities between the cities of Chicago and Grafton, Illinois.

DESCRIPTION: All lock chambers are 600 feet long by 110 feet wide.

Significant features of the work include replacing lower miter gates and sill modifications at Brandon Road, Dresden Island, and Marseilles Locks; and at Lockport Lock, removing deteriorated concrete from lock walls and resurfacing with new concrete, including wall armor.

AUTHORIZATION: River and Harbor Act of 1930.

REMAINING BENEFIT-REMAINING COST RATIO: 24.0 to 1 at 8-3/4 percent.

TOTAL BENEFIT-COST RATIO: 1.4 to 1 at 8-3/4 percent.

INITIAL BENEFIT-COST RATIO: 1.19 to 1 at 8-3/4 percent (FY 1993).

BASIS OF BENEFIT-COST RATIO: The benefit-cost ratio is based on navigation delays avoided and future maintenance costs avoided as presented in Rehabilitation Evaluation Report, dated June 1991 at June 1991 price levels.

SUMMARIZED FINANCIAL DATA			STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$27,200,000	Entire Project	33	Jun 1996
General Appropriations	$13,600,000				
Inland Waterways Trust Fund	$13,600,000				
Estimated Non-Federal Cost		0			
Total Estimated Project Cost		$27,200,000			

	General Appropriations	Inland Waterways Trust Fund	Accum. Pct. of Est. Fed. Cost
Allocations to 30 September 1994	$ 1,893,000	$ 1,893,000	
Conference Allowance for FY 1995	11,400,000	11,400,000	
Allocation for FY 1995	10,080,000 1/	10,080,000 1/	
Allocations through FY 1995	11,973,000	11,973,000	88
Allocation Requested for FY 1996	1,627,000	1,627,000	100
Programmed Balance to Complete after FY 1996	0	0	
Unprogrammed Balance to Complete after FY 1996	0	0	

1/ Reflects $3,609,000 reduction assigned as Savings and Slippage, and $969,000 reprogrammed to the project, and $3,136,000 in programmed carryover to FY 1996.

JUSTIFICATION: The lower miter gates at Brandon Road Lock, Dresden Island Lock, and Marseilles Lock are over 50 years old and in need of replacement. The existing gates do not meet current Corps design standards and are requiring increased maintenance due to their condition. These gates are designed with air chambers in the bottom of the gates to lessen the load required by the gate operating machinery. These air chambers are no longer functioning properly resulting in additional stresses applied to the miter gate machinery. The gates are designed with the water-barrier skin plate on the downstream face of the gate leaving the structure of the gate exposed upstream. During subfreezing weather this design allows ice to build up on structural members increasing the stress on the gate and its anchorages. Noticeable improvement in water quality on the Upper Waterway has dramatically increased ice formation at the locks. In January 1988 the miter gate at Marseilles broke off its anchorage and fell into the lock, closing the lock to navigation for eight days before Corps of Engineers' hired labor crews could repair the damage and reset the gate.

JUSTIFICATION: (Continued)
Lockport Lock: The lockwalls are in an advanced state of deterioration. The Lock is over 50 years old and has been subjected to extensive freeze-thaw damage. This is primarily due to the absence of air-entrainment in the original concrete mix. Air-entrainment gives concrete increased durability to freeze-thaw damage. The condition survey of the lockwalls indicates frost damage as deep as 18 inches. If not resurfaced, the lockwalls will continue to deteriorate and reduce the structural integrity of the lockwall. The surface erosion has left embedded recessed anchors exposed past the face of the concrete exposing barges and craft to puncture hazards. There is also a serious question as to the structural soundness of the mooring pin anchorages with a real danger of pullout under load of moored barges. Resurfacing of the lockwalls will extend the useful life of the lock significantly. Major commodities passing through the lock includes bituminous coal, petroleum products, and grain. Lock tonnage data for the last ten years is as follows:

YEAR	LOCK TONNAGE			
	Lockport	Brandon Road	Dresden Island	Marseilles
1993	17,010,000	17,063,000	19,340,000	21,130,000
1992	16,665,000	16,750,000	19,126,000	20,676,000
1991	16,889,000	17,113,000	19,361,000	20,950,000
1990	17,365,000	17,501,000	19,650,000	21,501,000
1989	15,574,000	15,679,000	17,862,000	18,823,000
1988	15,979,000	16,267,000	18,660,000	18,708,000
1987	13,963,000	14,435,000	16,694,000	17,588,000
1986	16,760,000	17,096,000	19,146,000	20,211,000
1985	14,745,000	15,294,000	17,206,000	18,558,000
1984	14,072,000	14,506,000	16,702,000	19,178,000

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $3,254,000 (which includes $1,627,000 from the Inland Waterway Trust Fund) and $3,136,000 ($1,568,000 from the IWTF), respectively, will be applied as follows:

Complete Construction (Stage I - Lower Miter Gate Replacement)	$ 4,819,000
Complete Construction (Stage II - Lockport Lockwall Resurfacing)	800,000
Planning, Engineering, and Design	199,000
Construction Management	572,000
Total	$ 6,390,000 1/

1/ Includes $3,195,000 from the Inland Waterway Trust Fund (IWTF).

NON-FEDERAL COST: None required.

STATUS OF LOCAL COOPERATION: None required.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal Cost Estimate of $27,200,000 is a decrease of $5,300,000 from the last estimate ($32,500,000) presented to Congress (FY 1995). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	$ -250,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	-5,050,000
Total	$ -5,300,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The miter gate replacement and lockwall resurfacing were addressed in the Final Environment Statement, Operation and Maintenance of a Nine-Foot Channel in the Illinois Waterway, from the Junction of the Calumet-Sag Channel and the Chicago Sanitary and Ship Canal to the LaGrange Lock and Dam, February 1975, and the Lockport Lock, Design Memorandum with Environmental Assessment for Lockport Lock and Brandon Road Lock and Dam (Rock Island District, May 1982). An Environmental Assessment addressing additional items associated with the project was completed and submitted for a 30 day public review on 8 December 1992. A Finding of No Significant Impact was signed by the District Commander on 16 February 1993.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1993. Lock closures are scheduled from July 11 through September 8, 1995. The scheduled completion data of June 1996 for programmed work is a slippage from the latest completion date of December 1995 presented to Congress. Change is due to a reanalysis of requirements.

APPROPRIATION TITLE: Construction, General - Major Rehabilitation - Channel and Harbors

PROJECT: Burns Waterway Harbor, Indiana (Continuing)

LOCATION: The project is located in northwestern Indiana on the southern shore of Lake Michigan in Porter County.

DESCRIPTION: The rehabilitation project consists of constructing a segmented reef breakwater system, 75 feet lakeward of the northern section of the existing rubblemound breakwater. The project provides for ten reef segments, 350 feet long with 50 feet spacing between segments.

AUTHORIZATION: River and Harbor Act of 1965

REMAINING BENEFIT - REMAINING COST RATIO: 1.4 to 1 at 8-1/4 percent

TOTAL BENEFIT-COST RATIO: 1.4 to 1 at 8-1/4 percent

INITIAL BENEFIT-COST RATIO: 1.4 to 1 at 8-1/4 percent (FY 1995).

BASIS OF BENEFIT COST RATIO: Benefits are from the latest available evaluation submitted in the Burns Waterway Harbor, Indiana, Breakwater Major Rehabilitation Evaluation Report, approved in August 1993, at October 1992 price levels.

SUMMARIZED FINANCIAL DATA		Accum. Pct. of Est. Fed. Cost	STATUS: (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	$15,800,000		Entire Project	0	Being Determined
Estimated Non-Federal Cost	0				
Total Estimated Project Cost	$15,800,000				

PHYSICAL DATA

Submerged Reef	3,500 feet long

SUMMARIZED FINANCIAL DATA		Accum. Pct. of Est. Fed. Cost
Allocations to 30 September 1994	0	
Conference Allowance for FY 1995	1,600,000	
Allocation for FY 1995	1,347,000 1/	
Allocations through FY 1995	1,347,000	9
Allocation Requested for FY 1996	4,000,000	34
Programmed Balance to Complete after FY 1996	10,453,000	
Unprogrammed Balance to Complete after FY 1996	0	

1/ Reflects $253,000 reduction assigned as savings & slippage.

JUSTIFICATION: In 1989, nearly 9 million tons of commerce passed though Burns Waterway Harbor. Approximately 80 percent consisted of raw material used in the production of steel, such as iron ore, limestone, coal and coke. The remaining 20 percent was bulk and general cargo commodities handled at the State of Indiana public terminal at Burns Waterway Harbor. Average growth rate in vessel traffic from 1980 to 1990 was 5.2 percent per year. The harbor is used by both deep-draft vessels and barges. Winter storms produce waves at the southern end of Lake Michigan which cause substantial physical damage to the breakwater at this harbor. Significant damage has also been incurred by vessels moored in the harbor and to docks, revetments and other infrastructure located inside the harbor. In addition to direct physical damage, shippers experience delays while loading and unloading vessels when waves inside the harbor exceed three feet in height. The construction of a Major Rehabilitation project for the Burns Waterway Harbor breakwater would reduce the occurrence of existing problems at the harbor and improve structural and functional reliability of the breakwater structures. The increase in stability of the Burns Waterway Harbor breakwater would reduce future operations and maintenance costs and emergency repair costs. The reduction of the transmitted wave condition inside the harbor would reduce damages to vessels and delays experienced by cargo-carrying vessels and barges. Reducing the vulnerability of the harbor breakwater to high intensity, low frequency storms would ensure increased usage of the harbor facilities. Average annual benefits in the amount of $1,558,400 are identified for Navigation-General Commercial-Deep Draft Harbor.

FISCAL YEAR 1996: The requested amount of $4,000,000 will be applied as follows:

Continue construction	$ 3,563,000
Planning, Engineering and Design	33,000
Construction Management	404,000
Total	$ 4,000,000

NON-FEDERAL COST: Not applicable.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $15,800,000 is an increase of $300,000 from the latest estimate ($15,500,000) presented to Congress (FY 1995). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	$246,000
Post Contract Award and other Estimating Adjustments (including contingency adjustments)	54,000
Total	$300,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Finding of No Significant Impact was signed on June 24, 1993.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1995. The Burns Waterway Harbor, Indiana, Breakwater Major Rehabilitation Report was approved in August 1993.

APPROPRIATION TITLE: Construction, General - Major Rehabilitation-Locks and Dams (Navigation)

PROJECT: Lock and Dam 14, Mississippi River, Iowa (New)

LOCATION: The project is located at Mississippi River Mile 493.3, near the city of LeClaire, in Scott County, Iowa. The facility is a unit of the Inland Waterway Navigation System of the Upper Mississippi River Basin and is one of twenty-nine such facilities between Minneapolis, Minnesota, and St. Louis, Missouri.

DESCRIPTION: The lock chamber is 600 feet long by 110 feet wide and has a maximum lift of 11 feet. An auxiliary lock is located adjacent to the Iowa side of the channel. The dam is 2,703-feet long and consists of a 1,343-foot gated section and a 1,360-foot non-submersible earth and rock dike section. Significant features of the work include: resurfacing of concrete in the lock chamber and on dam piers; replacement of operating machinery and the electrical system; installation of a bubbler system in the lock chamber; replacement of roller and tainter gate chain hoisting equipment.

AUTHORIZATION: River and Harbor Act of 1930.

REMAINING BENEFIT-REMAINING COST RATIO: 2.3 to 1 at 8 percent.

TOTAL BENEFIT-COST RATIO: 2.3 to 1 at 8 percent.

BASIS OF BENEFIT-COST RATIO: The Mississippi River, LeClaire, Iowa, Lock and Dam No. 14, Rehabilitation Evaluation Report, dated June 1993 approved on 18 August 1993 at October 1994 price levels.

SUMMARIZED FINANCIAL DATA		
Estimated Federal Cost		$20,900,000
General Appropriations	$10,450,000	
Inland Waterways Trust Fund	$10,450,000	
Estimated Non-Federal Cost		0
Total Estimated Project Cost		$20,900,000

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	0	Being Determined

	General Appropriations	Inland Waterways Trust Fund	Accum. Pct. of Est. Fed. Cost
Allocations to 30 September 1994	$ 0	$ 0	
Conference Allowance for FY 1995	0	0	
Allocation for FY 1995	0	0	
Allocations through FY 1995	0	0	0
Allocation Requested for FY 1996	350,000	350,000	3
Programmed Balance to Complete after FY 1996	10,100,000	10,100,000	
Unprogrammed Balance to Complete after FY 1996	0	0	

JUSTIFICATION: The dimensional stability of the lockwalls, guidewalls, and concrete surfaces are showing distress and deterioration. Vertical monolith joints in the walls are deteriorated and abraded as a result of barges scraping the walls. The loss of dimensional stability results in barges catching on protection armor and tearing it loose. There is significant concrete damage at all miter gate monoliths. Concrete near the miter gate corners and anchorages is very critical, as the potential exists for damage to lock operating components including the miter gates which would result in closure of the lock for an extended period of time. Overall, the lock surface concrete requires rehabilitation to slow further deterioration, provide protection for critical miter gate components, extend the reliable life of the structure, and to provide a safer working environment for lock personnel. The existing lock and dam electrical system is original equipment, installed when the dam was constructed in the 1930's, is showing advanced signs of deterioration, and does not meet current design standards. Most of the electrical components are not in compliance with the National Electric Code and operation of this equipment is becoming a major safety concern. The electrical distribution system is comprised of lead cables. Increasing resistance of these cables indicates a degradation of the conductivity and insulation coverings. As a result, the operation and maintenance costs will increase with a continued decrease in reliability. The lock mechanical systems are the most critical components in keeping the lock operational. Loss of function of these systems would force the lock to operate at 40 percent efficiency because the gates would have to be opened and closed by towboats. Spare parts for the machinery are becoming increasingly difficult to obtain. The dam roller and tainter gate chains are original equipment and will require major renovation to ensure their reliability. The chains support gates that are used to control and maintain the navigation pools. The lower portion of the roller gate chains are the most environmentally damaged due to their underwater location.

Corrosion in the lower portions has caused them to become stiff and difficult to pass over the chain sprockets when raising the gates. Tainter gate chains are also corroded. Replacing the lower one-third of the roller gate chains with stainless steel chains and replacing the tainter gate chains with log chains and pocket wheels will restore them to a fully functional mode. As recently as January 1990, a roller gate chain failed resulting in the loss of use of the gate. The analysis of the broken parts indicated a fatigue failure. Rehabilitation of the chains is required to reduce maintenance and insure

JUSTIFICATION: (Continued)

continued reliability. Cracking and spalling on the dam pier horizontal surfaces are allowing water to leak into the concrete and cause deterioration. The pier tops need to be sandblasted and waterproofed to prevent further deterioration and eventual failure. Major commodities passing through the lock include bituminous coal, petroleum products, and grain. Lock tonnage figures for the last 10 years are as follows:

Year	Tonnage	Year	Tonnage	Year	Tonnage	Year	Tonnage
1993	18,355,000	1990	31,631,000	1987	24,511,000	1984	25,191,000
1992	29,998,000	1989	26,843,000	1986	18,982,000		
1991	27,844,000	1988	26,683,000	1985	19,049,000		

FISCAL YEAR 1996: The requested amount of $700,000 will be applied as follows:

Planning, Engineering, and Design	690,000
Construction Management	10,000
Total	$ 700,000 1/

1/ Includes $350,000 from the Inland Waterway Trust Fund.

NON-FEDERAL COST: None required.

STATUS OF LOCAL COOPERATION: None required.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate is $20,900,000. No previous estimate has been presented to Congress.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An environmental assessment was distributed for public review in February 1993. A Finding of No Significant Impact was signed in April 1993.

OTHER INFORMATION: None.

APPROPRIATION TITLE: Construction, General - Flood Control Projects (Major Rehabilitation)

PROJECT: Lake Ashtabula and Baldhill Dam, North Dakota (Major Rehab)(Continuing)

LOCATION: Baldhill Dam and Reservoir (Lake Ashtabula) are located in eastern North Dakota, about 75 miles west of Fargo and 9 miles northwest of Valley City. The dam is on the Sheyenne River, about 271 river miles upstream of the confluence of the Sheyenne River with the Red River of the North near Fargo. Flood control, water supply, pollution abatement, and recreation are the primary purposes of this project.

DESCRIPTION: The existing earthfill dam is 1,650 feet long and includes a concrete spillway section with three tainter gates. The impoundment capacity is 68,600 acre-feet. The 1982 reconnaissance study and the 1986 risk assessment study found that the existing spillway is not capable of handling a PMF (probable maximum flood). A general design memorandum completed in January 1987 recommended constructing an auxiliary spillway on the left abutment, retaining the existing spillway on the right abutment, constructing a 5-foot concrete parapet wall on top of the dam embankment, and stabilizing the slope on the right abutment. A subsequent value engineering study recommended the auxiliary spillway be ungated and be placed over the existing embankment instead of gated and in the left abutment. This value engineered plan is described in Supplement 1 to General Design Memorandum, Baldhill Dam and Reservoir, dated December 1988. The Feature Design Memorandum on the ungated auxiliary spillway and repair of the existing gated spillway was prepared in April 1993. The revised auxiliary spillway comprises an 880 foot wide broad crest weir located in an excavated section of the dam embankment, a downstream flexible slab, and a rigid chute and downstream apron. Repairs to the existing spillway are also recommended. The ungated auxiliary spillway work will be accomplished under the Dam Safety authority. The repair of the existing spillway will be accomplished under both the Dam Safety and the Major Rehabilitation authorities.

AUTHORIZATION: Flood Control Act of 1944.

REMAINING BENEFIT-REMAINING COST RATIO: 3.4 to 1 at 8 1/2 percent.

TOTAL BENEFIT-COST RATIO: 2.2 to 1 at 8 1/2 percent.

INITIAL BENEFIT-COST RATIO: 1.3 to 1 at 8 1/2 (FY 1988).

BASIS OF BENEFIT-COST RATIO: The benefit-cost ratio is based on current cost estimates as presented in the April 1993 Feature Design Memorandum which have been deflated to October 1986 price levels, and benefits as presented in Supplement 1 to GDM for Baldhill Dam and Reservoir, dated December 1988. The cost estimates used are the total of both the Dam Safety and the Major Rehabilitation work.

SUMMARIZED FINANCIAL DATA

		Accum. Pct. of Est. Fed. Cost
Estimated Federal Cost (Major Rehab.)	$6,280,000	
Estimated Non-Federal Cost	0	
Total Estimated Project Cost	$6,280,000 1/	
Allocations to 30 September 1994	$ 689,000	
Conference Allowance for FY 1995	4,430,000	
Allocation for FY 1995	3,729,000 2/	
Allocations through FY 1995	4,418,000	70
Allocation Requested for FY 1996	853,000	84
Programmed Balance to Complete after FY 1996	1,009,000	
Unprogrammed Balance to Complete after FY 1996	0	

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	30	Being Determined

PHYSICAL DATA

Dams	
Spillway (Repair Existing)	3 gates

1/ The estimated total project cost for both the Major Rehabilitation and the Dam Safety work is $24,599,000. Funding for the project under Major Rehabilitation should be accomplished concurrently with the Dam Safety funding.

2/ Reflects $701,000 reduction assigned as savings and slippage.

JUSTIFICATION: In 1892, 1897, 1916 and 1919, the Sheyenne River overflowed its banks causing significant damage. During the 1930's, the basin experienced a serious drought and many river towns lost their water supplies. Caught between these two extremes in water levels, the residents of the basin asked for help. A flood control and water supply project was proposed. Baldhill Dam was constructed and formally dedicated on September 21, 1952. Baldhill Dam has been classified as a large, high hazard dam according to the criteria and guidelines established by the National Program for the Inspection of Dams. The dam is in a long, narrow valley above Valley City, North Dakota (1980 population - 7,771). The dam was designed to create an impoundment with a capacity of 68,600 acre-feet to control runoff from an effective drainage area of 1,988 square miles. It provides a substantial degree of flood control to the cities, villages, and urban areas along the Sheyenne River below the dam. In its present condition, Baldhill Dam has inadequate spillway capacity to pass the probable maximum flood (PMF) and is therefore subject to overtopping. The existing spillway has a capacity of only 43,100 cfs. The capacity needed to pass the PMF is 126,000 cfs. Overtopping endangers the integrity of the embankment at extremely high flows. If the dam failed, a very destructive surge of water would rush down the valley taking about 4 to 6 hours to reach Valley City. At its worst, the flood would inundate about 75 percent of Valley City to some extent, including many of the facilities normally available for emergency shelter. The proposed plan is to construct an auxiliary spillway which will provide the additional discharge capacity required to pass the PMF and to repair the existing gated spillway to make it reliable for passing the original design flows as well as a portion of the higher flows of the revised PMF.

Annual Benefits	Amount
Flood Control	$1,620,700
Recreation	1,483,000
Water Supply	1,689,000
Total	$4,792,700

FISCAL YEAR 1996: The requested amount of $853,000 will be applied as follows:

Continue construction of Spillway	$ 781,000
Planning, Engineering and Design	32,000
Construction Management	40,000
Total	$ 853,000

NON-FEDERAL COST: Not applicable.

STATUS OF LOCAL COOPERATION: Not applicable.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate for the major rehabilitation work of $6,280,000 is the same as the latest estimate ($6,280,000) presented to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS on the GDM was filed with EPA on 5 August 1988. The Record of Decision for the Final EIS on the GDM was signed on 25 April 1989. An Environmental Assessment for the GDM Supplement was prepared in December 1988. A Finding of No Significant Impact on the GDM Supplement was signed on 21 November 1989.

OTHER INFORMATION: The recommended overall plan for major rehabilitation and dam safety is to increase the spillway capacity at Baldhill Dam to provide the capability of discharging PMF (Probable Maximum Flood) flows. This will be accomplished by constructing an 880 foot long auxiliary ungated broad crest weir spillway located in an excavated section of the dam embankment, including a downstream flexible slab and a rigid chute and downstream apron, and the repair and modification of the existing gated spillway. The dam safety and the major rehabilitation modifications are both integral parts of the total package and need to be funded, designed, and constructed as one unit.

A risk assessment report was prepared in June 1986 to investigate the potential impacts that a range of floods would have on the hydrologic/hydraulic capability of Baldhill Dam. The report indicated that there is a serious spillway discharge capacity deficiency, and recommended increasing discharge capacity by constructing an auxiliary spillway to supplement the existing spillway. The report was approved by the ASA(CW) (Assistant Secretary of the Army, Civil Works) in November 1987.

In a separate action, the Corps of Engineers is evaluating a reservoir flood control pool raise of 5 feet as a component of the Sheyenne River Flood Control project. The recommended alternative being considered for dam safety and major rehabilitation modifications will not preclude the ability to modify the dam for the authorized flood control purpose in the future. The recommended dam safety and major rehabilitation modifications are compatible with the flood control features. However, past coordination meetings over the period 1982 through 1993 with the NDSWC (North Dakota State Water Commission) and local residents indicated some opposition to raising the dam for flood control. Accordingly, flood control features of the Sheyenne River Flood Control project are not being included as part of the dam safety project. However, in April 1994, a Joint Water Resource District, comprised of eight member Water Resource Districts along the Sheyenne River, was formed to be the local sponsor for the raise of the flood control pool at Baldhill Dam. Additional coordination is being conducted with the NDSWC and the Joint Water Resource District on the flood pool raise.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation**

a. Channels and Harbors.

The budget estimate of $65,116,000 provides for essential operation and maintenance work on 77 channel and harbor projects named in the list which follows. The work to be accomplished under this activity consists of operating and maintaining the Great Lakes navigation channels and harbors by means of dredging, constructing bulkheads and confined disposal areas, snagging, and repairing channel stabilization works, navigation structures, and harbor jetties, all as authorized in the laws pertaining to river and harbor projects.

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Illinois			
Andalusia Harbor	0	71,000	
	(0)	(0)	1. None.
	(0)	(71,000)	2. None.
Chicago Harbor	1,985,000	2,545,000	
	(1,316,000)	(1,217,000)	1. None.
	(669,000)	(1,328,000)	2. Bulkhead fabrication.
Chicago River	390,000	610,000	
	(342,000)	(610,000)	1. Prepare draft EIS for Confined Disposal Facility in FY 96.
	(48,000)	(0)	2. None.
Lake Michigan Diversion	469,000	645,000	
	(469,000)	(645,000)	1. Variation in certifying water diversion quantity in FY 96.
	(0)	(0)	2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	OBLIGATIONS Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Illinois (Cont'd)			
Rock Island Small	0	123,000	
Boat Harbor	(0)	(0)	1. None.
	(0)	(123,000)	2. None.
Waukegan Harbor	452,000	970,000	
	(94,000)	(123,000)	1. Perform environmental studies in FY 96.
	(358,000)	(847,000)	2. Dredge harbor entrance channel.
Illinois & Indiana			
Calumet Harbor &	1,390,000	600,000	
River	(212,000)	(180,000)	1. None.
	(1,178,000)	(420,000)	2. None.
Indiana			
Burns Waterway	1,591,000	1,545,000	
Harbor	(69,000)	(49,000)	1. Project condition surveys in FY 95.
	(1,522,000)	(1,496,000)	2. Dredging, repair north breakwater.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Indiana (Cont'd)			
Burns Waterway	80,000	95,000	
Small Boat Harbor	(14,000)	(55,000)	1. Environmental coordination in FY 96.
	(66,000)	(40,000)	2. None.
Indiana Harbor	302,000	320,000	
	(105,000)	(50,000)	1. Environmental studies in FY 95.
	(197,000)	(270,000)	2. None.
Michigan City	151,000	540,000	
Harbor	(129,000)	(60,000)	1. Environmental studies in FY 95.
	(22,000)	(480,000)	2. None.
Michigan			
Alpena Harbor	0	218,000	
	(0)	(10,000)	1. Condition surveys in FY 96.
	(0)	(208,000)	2. None.
Arcadia Harbor	97,000	77,000	
	(25,000)	(20,000)	1. Prepare audit assembly in FY 95.
	(72,000)	(57,000)	2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	OBLIGATIONS Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Michigan (Cont'd)			
Bolles Harbor	256,000	29,000	
	(15,000	(14,000)	1. None.
	(241,000)	(15,000)	2. None.
Channels in Lake St. Clair	488,000	245,000	
	(149,000)	(145,000)	1. None.
	(339,000)	(100,000)	2. None.
Charlevoix Harbor	0	118,000	
	(0)	(58,000)	1. Condition surveys in FY 96.
	(0)	(60,000)	2. None.
Detroit River	3,929,000	4,729,000	
	(1,547,000)	(1,260,000)	1. Map survey control points, variation in Confined Disposal Facility monitoring & testing activities in FY 95.
	(2,382,000)	(3,469,000)	2. Locate and remove obstructions, dredging, and expand Confined Disposal Facility.
Eagle Harbor	0	60,000	
	(0)	(12,000)	1. Condition surveys in FY 96.
	(0)	(48,000)	2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Michigan (Cont'd)			
Frankfort Harbor	616,000	372,000	
	(52,000)	(33,000)	1. Variation in condition surveys in FY 95.
	(564,000)	(339,000)	2. None.
Grand Haven Harbor	1,065,000	817,000	
	(407,000)	(555,000)	1. Testing & monitoring of Confined Disposal Facility, variation in condition & structure surveys, DMMP in FY 96.
	(658,000)	(262,000)	2. None.
Grand Marais Harbor	0	218,000	
	(0)	(10,000)	1. Condition surveys in FY 96.
	(0)	(208,000)	2. None.
Grand Traverse Bay Harbor	0	123,000	
	(0)	(10,000)	1. Condition surveys in FY 96.
	(0)	(113,000)	2. None.
Grelickville Harbor	0	63,000	
	(0)	(15,000)	1. Condition surveys in FY 96.
	(0)	(48,000)	2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	OBLIGATIONS Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Michigan (Cont'd)			
Harbor Beach	0	77,000	
Harbor	(0)	(77,000)	1. Map survey control points, condition & structure surveys in FY 96.
	(0)	(0)	2. None.
Holland Harbor	573,000	417,000	
	(358,000)	(245,000)	1. Confined Disposal Facility monitoring & variation in condition surveys in FY 95.
	(215,000)	(172,000)	2. None.
Inland Route	47,000	31,000	
	(47,000)	(31,000)	1. Negotiations with the State for turn-over of lock in FY 95.
	(0)	(0)	2. None.
Keweenaw Waterway	888,000	1,641,000	
	(71,000)	(76,000)	1. None.
	(817,000)	(1,565,000)	2. Repair east breakwater, lower entry.
Leland Harbor	221,000	280,000	
	(15,000)	(13,000)	1. Variation in condition surveys in FY 95.
	(206,000)	(267,000)	2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Michigan (Cont'd)			
Lexington Harbor	105,000	224,000	
	(95,000)	(61,000)	1. Monitoring & assessment report for beach nourishment in FY 95.
	(10,000)	(163,000)	2. None.
Little Lake Harbor	315,000	136,000	
	(20,000)	(10,000)	1. Variation in condition surveys in FY 95.
	(295,000)	(126,000)	2. None.
Ludington Harbor	1,434,000	495,000	
	(91,000)	(88,000)	1. None.
	(1,343,000)	(407,000)	2. None.
Manistee Harbor	974,000	440,000	
	(95,000)	(48,000)	1. Map survey control points & variation in condition surveys in FY 95.
	(879,000)	(392,000)	2. None.
Monroe Harbor	230,000	772,000	
	(110,000)	(100,000)	1. None.
	(120,000)	(672,000)	2. Dredging.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Michigan (Cont'd)			
Muskegon Harbor	842,000	805,000	
	(204,000)	(155,000)	1. Monitoring & assessment report for beach nourishment in FY 95.
	(638,000)	(650,000)	2. None.
Ontonagon Harbor	1,973,000	455,000	
	(64,000)	(67,000)	1. None.
	(1,909,000)	(388,000)	2. None.
Pentwater Harbor	161,000	799,000	
	(20,000)	(41,000)	1. Archeological investigations & structure surveys in FY 96.
	(141,000)	(758,000)	2. Repair south pier & south revetment, sections B, F, G, H, J.
Point Lookout Harbor	0	301,000	
	(0)	(22,000)	1. Condition surveys in FY 96.
	(0)	(279,000)	2. None.
Port Austin Harbor	0	188,000	
	(0)	(10,000)	1. Condition surveys in FY 96.
	(0)	(178,000)	2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State	OBLIGATIONS		
Project Name	Estimated FY 1995 ($) Total (Operations) (Maintenance)	Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Michigan (Cont'd)			
Port Sanilac Harbor	0	260,000	
	(0)	(57,000)	1. Beach nourishment monitoring & condition surveys in FY 96.
	(0)	(203,000)	2. None.
Portage Lake Harbor	15,000	103,000	
	(10,000)	(20,000)	1. Structure surveys & variation in condition surveys in FY 96.
	(5,000)	(83,000)	2. None.
Rouge River	734,000	297,000	
	(130,000)	(100,000)	1. Confined Disposal Facility monitoring in FY 95.
	(604,000)	(197,000)	2. None.
Saginaw River	1,625,000	1,802,000	
	(702,000)	(506,000)	1. Sediment sampling, Confined Disposal Facility study, variation in condition surveys in FY 95.
	(923,000)	(1,296,000)	2. Dredging.
Saugatuck Harbor	80,000	918,000	
	(20,000)	(44,000)	1. Structure surveys & variation in condition surveys in FY 96.
	(60,000)	(874,000)	2. Repair north & south piers.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Michigan (Cont'd)			
St. Clair River	1,476,000	868,000	
	(246,000)	(325,000)	1. Map survey control points in FY 96.
	(1,230,000)	(543,000)	2. Locate and remove obstructions.
St. Joseph Harbor	2,292,000	1,080,000	
	(350,000)	(348,000)	1. None.
	(1,942,000)	(732,000)	2. Beach nourishment.
White Lake Harbor	74,000	434,000	
	(34,000)	(38,000)	1. Archeological investigations in FY 96.
	(40,000)	(396,000)	2. None.
Michigan & Wisconsin			
Menominee Harbor	0	32,000	
	(0)	(28,000)	1. Condition surveys in FY 96.
	(0)	(4,000)	2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	OBLIGATIONS Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Minnesota			
Minnesota River	142,000	145,000	
	(0)	(55,000)	1. Project condition surveys in FY 96.
	(142,000)	(90,000)	2. None.
Minnesota & Wisconsin			
Duluth-Superior Harbor	2,558,000	3,396,000	
	(971,000)	(1,060,000)	1. None.
	(1,587,000)	(2,336,000)	2. Repair Superior entry piers, dredging.
New York			
Buffalo Harbor	1,068,000	455,000	
	(193,000)	(90,000)	1. Variation in project condition surveys in FY 95.
	(875,000)	(365,000)	2. None.
Dunkirk Harbor	0	309,000	
	(0)	(23,000)	1. Project condition surveys in FY 96.
	(0)	(286,000)	2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
New York (Cont'd)			
Great Sodus Bay	0	10,000	
Harbor	(0)	(10,000)	1. Project condition surveys in FY 96.
	(0)	(0)	2. None.
Irondequoit	0	160,000	
Bay Harbor	(0)	(10,000)	1. Project condition surveys in FY 96.
	(0)	(150,000)	2. None.
Little Sodus	500,000	1,560,000	
Bay Harbor	(0)	(10,000)	1. Project condition surveys in FY 96.
	(500,000)	(1,550,000)	2. Repair of breakwaters.
Oak Orchard	0	10,000	
Harbor	(0)	(10,000)	1. Project condition surveys in FY 96.
	(0)	(0)	2. None.
Olcott Harbor	0	10,000	
	(0)	(10,000)	1. Project condition surveys in FY 96.
	(0)	(0)	2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
New York (Cont'd)			
Oswego Harbor	0	496,000	
	(0)	(20,000)	1. Project condition surveys in FY 96.
	(0)	(476,000)	2. None.
Wilson Harbor	0	10,000	
	(0)	(10,000)	1. Project condition surveys in FY 96.
	(0)	(0)	2. None.
Ohio			
Ashtabula Harbor	878,000	1,088,000	
	(63,000)	(45,000)	1. Environmental testing, harbor inspections in FY 95.
	(815,000)	(1,043,000)	2. Dredging.
Cleveland Harbor	5,703,000	13,038,000	
	(192,000)	(250,000)	1. Environmental testing in FY 96.
	(5,511,000)	(12,788,000)	2. Dredging, repair breakwaters, Confined Disposal Facility construction, repair pier.
Conneaut Harbor	967,000	655,000	
	(57,000)	(30,000)	1. Variation in project condition surveys in FY 95.
	(910,000)	(625,000)	2. Dredging.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	OBLIGATIONS Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Ohio (Cont'd)			
Huron Harbor	48,000	820,000	
	(46,000)	(34,000)	1. Harbor structure inspections in FY 95.
	(2,000)	(786,000)	2. Dredging.
Lorain Harbor	1,096,000	407,000	
	(71,000)	(50,000)	1. Harbor structure inspections in FY 95.
	(1,025,000)	(357,000)	2. None.
Rocky River	0	12,000	
	(0)	(12,000)	1. Project condition surveys in FY 96.
	(0)	(0)	2. None.
Sandusky Harbor	1,603,000	1,030,000	
	(75,000)	(60,000)	1. Variation in project condition surveys in FY 95.
	(1,528,000)	(970,000)	2. Dredging.
Toledo Harbor	3,223,000	3,502,000	
	(193,000)	(250,000)	1. Variation in project condition surveys in FY 96.
	(3,030,000)	(3,252,000)	2. Dredging.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Ohio (Cont'd)			
Vermilion Harbor	0	10,000	
	(0)	(10,000)	1. Project condition surveys in FY 96.
	(0)	(0)	2. None.
Pennsylvania			
Erie	48,000	468,000	
	(48,000)	(35,000)	1. Harbor structure inspections in FY 95.
	(0)	(433,000)	2. None.
Wisconsin			
Algoma Harbor	0	117,000	
	(0)	(20,000)	1. Condition surveys in FY 96.
	(0)	(97,000)	2. None.
Cornucopia Harbor	52,000	107,000	
	(52,000)	(10,000)	1. Map survey control points & sediment sampling in FY 95.
	(0)	(97,000)	2. None.

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Wisconsin (Cont'd)			
Green Bay Harbor	1,015,000	1,029,000	
	(385,000)	(385,000)	1. None.
	(630,000)	(644,000)	2. Dredging.
Kenosha Harbor	137,000	130,000	
	(15,000)	(32,000)	1. Variation in condition surveys in FY 96.
	(122,000)	(98,000)	2. None.
Kewaunee Harbor	249,000	300,000	
	(124,000)	(119,000)	1. None.
	(125,000)	(181,000)	2. None.
Manitowoc Harbor	453,000	257,000	
	(97,000)	(96,000)	1. None.
	(356,000)	(161,000)	2. None.
Milwaukee Harbor	4,896,000	3,123,000	
	(355,000)	(325,000)	1. None.
	(4,541,000)	(2,798,000)	2. Repair spalling, south breakwater, section E.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

a. Channels and Harbors. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	OBLIGATIONS Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Wisconsin (Cont'd)			
Sheboygan Harbor	689,000	883,000	
	(62,000)	(65,000)	1. None.
	(627,000)	(818,000)	2. Repair north pier, sections A & B.
Sturgeon Bay Harbor	978,000	2,831,000	
& Lake Michigan	(90,000)	(90,000)	1. None.
Ship Canal	(888,000)	(2,741,000)	2. Repair south detached breakwater, sections D & E.
Two Rivers Harbor	298,000	760,000	
	(20,000)	(47,000)	1. Sediment sampling & structure surveys in FY 96.
	(278,000)	(713,000)	2. Repair south revetment, sections E & F.
Other Projects	2,564,000		
Maintained	(393,000)		
Periodically	(2,171,000)		
Sub-Total Regular O&M For Channels & Harbors	56,485,000	65,116,000	
	(11,129,000)	(10,914,000)	
	(45,356,000)	(54,202,000)	

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

   a. Channels and Harbors. (Cont'd)

DIKED DISPOSAL

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Michigan			
Sub-Total Diked Disposal	350,000 (0) (350,000)		
Total-Channels & Harbors	56,835,000 (11,129,000) (45,706,000)	65,116,000 (10,914,000) (54,202,000)	

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

b. Locks, Dams & Canals.

The budget estimate of $103,591,000 provides for the operational requirements of three projects, portions of the Illinois Waterway and Mississippi River projects, and caretaker status of the Fox River, Wisconsin project. Requirements include: operation of project facilities; labor; supplies; material and parts required for day-to-day functioning of projects; and periodic maintenance, repairs and replacements. The requested amount also includes application of special recreation use fees for recreation areas.

State	OBLIGATIONS		
Project Name	Estimated FY 1995 ($) Total (Operations) (Maintenance)	Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Illinois			
Illinois Waterway	20,076,000 (11,430,000) (8,646,000)	20,844,000 (11,656,000) (9,188,000)	1. None. 2. Dredging; repair gates, strut assemblies, machinery, concrete, electrical & mechanical features of locks; repair two wicket dams and five gated dams; remove channel obstructions; construct long-term disposal site for dredge material; replace derrick boat.
Illinois and Mississippi Canal, Il (Hennepin)	567,000 (0) (567,000)	465,000 (0) (465,000)	1. None. 2. None.

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

b. Locks, Dams & Canals. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Illinois (Cont'd)			
Mississippi River between Missouri River & Minneapolis (NCD)	82,510,000 (30,913,000) (51,597,000)	73,347,000 (33,543,000) (39,804,000)	1. None. 2. Dredging; remove channel obstructions; maintain recreation facilities; repair wing dams in Pools 13 and 22; perform structural repairs to Dams 13 and 15; repair gates, anchor bars, strut assemblies, and operating machinery of locks; maintain dikes and spillways at Locks 11-14, 16-18, 21 and 22; continue tainter and roller gate chain replacement at Locks and Dams 21 and 22; initiate tainter and roller gate chain replacement at Locks 13, 15, 17, and 18; crane carrier and bulkhead supply contract at Locks and Dams 2, 4, 5, and 10; dredge material site preparation; Lock and Dam 5 install tainter gate machinery; Lock and Dam 1 installation of tainter valve machinery; Lock and Dam 1 repair three leaking sluiceways; Lock and Dam 2-10 guidewall evaluation; maintenance and evaluation of channel control structures; includes Major Rehabilitation at Locks and Dams 3, 5A-9 at $4,954,000: see justification following this table.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

b. Locks, Dams & Canals. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Minnesota			
Reservoirs at Headwaters of Mississippi River	3,214,000 (2,268,000) (946,000)	3,515,000 (2,309,000) (1,206,000)	1. None. 2. Leach Lake and Sandy Lake Dams Design Memorandums in Fy 96.
New York			
Black Rock Channel & Tonawanda Harbor	3,090,000 (861,000) (2,229,000)	3,205,000 (725,000) (2,480,000)	1. Periodic inspection, rescue boat, update master plan in FY 95. 2. Repair upstream lock approach wall, paint lock gates.
Wisconsin			
Fox River	2,230,000 (1,743,000) (487,000)	2,215,000 (1,509,000) (706,000)	1. Crack evaluation in sluiceway piers & variation in operation of dams in FY 95. 2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. **Navigation** (Cont'd)

b. Locks, Dams & Canals. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Total-Locks, Dams & Canals	111,687,000 (47,215,000) (64,472,000)	103,591,000 (49,742,000) (53,849,000)	
TOTAL NAVIGATION	168,522,000 (58,344,000) (110,178,000)	168,707,000 (60,656,000) (108,051,000)	

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. **Flood Control**

a. Reservoirs.

The budget estimate of $21,649,000 for the operation and maintenance of 14 flood control reservoir projects within the division provides the amount for operation and maintenance requirements. Annual requirements are for operation and maintenance of project facilities; labor; supplies; material and parts required for the day-to-day functioning of projects. The requested amount also includes application of special recreation use fees for recreation areas.

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Illinois			
Farm Creek	228,000	273,000	
	(121,000)	(158,000)	1. Dam failure emergency planning & cultural resource management in FY 96.
	(107,000)	(115,000)	2. None.
Iowa			
Coralville Lake	2,723,000	2,654,000	
	(2,002,000)	(2,068,000)	1. None.
	(721,000)	(586,000)	2. None.
Red Rock Dam - Lake Red Rock	3,621,000	3,539,000	
	(2,015,000)	(2,378,000)	1. Sediment survey and dam grouting evaluation in FY 96.
	(1,606,000)	(1,161,000)	2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. **Flood Control** (Cont'd)

a. Reservoirs. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Iowa (Cont'd)			
Saylorville Lake	3,390,000	4,956,000	
	(2,610,000)	(2,835,000)	1. None.
	(780,000)	(2,121,000)	2. None.
Minnesota			
Lac qui Parle Lake	478,000	550,000	
	(415,000)	(498,000)	1. Sedimentation survey in FY 96.
	(63,000)	(52,000)	2. None.
Orwell Lake	944,000	4,077,000	
	(258,000)	(268,000)	1. None.
	(686,000)	(3,809,000)	2. Continue dam spillway construction in FY 96.
Red Lake Reservoir	302,000	302,000	
	(289,000)	(215,000)	1. Reservoir regulation plan update in FY 95.
	(13,000)	(87,000)	2. None.

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. **Flood Control** (Cont'd)

a. Reservoirs. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Minnesota & South Dakota			
Big Stone Lake-	496,000	475,000	
Whetstone River	(190,000)	(195,000)	1. None.
	(306,000)	(280,000)	2. None.
Lake Traverse	689,000	973,000	
	(477,000)	(372,000)	1. Evaluation reports on seepage through sheetpile at Reservation Dam and deterioration of slopes at White Rock Dam in FY 95.
	(212,000)	(601,000)	2. None.
New York			
Mt. Morris Lake	2,031,000	1,810,000	
	(1,259,000)	(1,030,000)	1. Purchase & install exhibit equipment, update O&M manual in FY 95.
	(772,000)	(780,000)	2. None.
North Dakota			
Lake Ashtabula-	939,000	1,230,000	
Baldhill Dam	(779,000)	(957,000)	1. Implementation of Operational Management Plan in FY 96.
	(160,000)	(273,000)	2. None.

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. **Flood Control** (Cont'd)

a. Reservoirs. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
North Dakota (Cont'd)			
Homme Lake	214,000	149,000	
	(207,000)	(149,000)	1. Completed piezometer automation in FY 95.
	(7,000)	(0)	2. None.
Souris River	204,000	101,000	
	(159,000)	(101,000)	1. Variation in water quality data collection in FY 95.
	(45,000)	(0)	2. None.
Wisconsin			
Eau Galle River	663,000	560,000	
Lake	(491,000)	(438,000)	1. Dam safety study in FY 95.
	(172,000)	(122,000)	2. None.
Total-Reservoirs	16,922,000	21,649,000	
	(11,272,000)	(11,662,000)	
	(5,650,000)	(9,987,000)	

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. **Flood Control** (Cont'd)

b. Channel Improvements, Inspections and Miscellaneous Maintenance.

The budget estimate of $1,161,000 provides for the inspection of one shoreline protection structure, the annual maintenance requirements of one local flood protection project, minimum maintenance of one partially constructed flood control project and the inspection of completed flood control projects turned over to local interests to ensure adequate operation and maintenance.

State	OBLIGATIONS		
Project Name	Estimated FY 1995 ($)	Estimated FY 1996 ($)	Reason for Change and Major Maintenance Items
	Total	Total	
	(Operations)	(Operations)	1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-).
	(Maintenance)	(Maintenance)	2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Indiana			
Beverly Shores	51,000	35,000	
	(49,000)	(0)	1. Structure inspection in FY 95.
	(2,000)	(35,000)	2. None.
Michigan			
Sebewaing River	14,000	10,000	
	(7,000)	(8,000)	1. None.
	(7,000)	(2,000)	2. None.
Wisconsin			
La Farge Lake	43,000	43,000	
	(43,000)	(43,000)	1. None.
	(0)	(0)	2. None.

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. **Flood Control** (Cont'd)

b. Channel Improvements, Inspections and Miscellaneous Maintenance. (Cont'd)

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Inspection of Completed Works	841,000 (841,000) (0)	1,073,000 (998,000) (75,000)	 1. Increase in the number of projects inspected in FY 96. 2. None.
Other Projects Maintained Periodically	147,000 (0) (147,000)		
Total - Channel Improvements, Inspections and Miscellaneous Maintenance.	1,096,000 (940,000) (156,000)	1,161,000 (1,049,000) (112,000)	
TOTAL FLOOD CONTROL	18,018,000 (12,212,000) (5,806,000)	22,810,000 (12,711,000) (10,099,000)	

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

3. Multiple-Purpose Power Projects

The budget estimate of $14,962,000 for the operation and maintenance of the St. Marys Falls Canal, locks and power plant provides the amount for operational requirements. Annual requirements are for operation of project facilities; labor; supplies; materials and parts required for the day-to-day functioning of the project.

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Michigan			
St. Marys River	15,727,000	14,962,000	
	(6,789,000)	(7,005,000)	1. None.
	(8,938,000)	(7,957,000)	2. Locate & remove obstructions, repair unit 3A turbine generator & excitation systems, south dike at unit 10, maintain the locks.
TOTAL MULTIPLE-PURPOSE POWER PROJECTS	15,727,000	14,962,000	
	(6,789,000)	(7,005,000)	
	(8,938,000)	(7,957,000)	

NORTH CENTRAL DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

4. Protection of Navigation

The budget estimate of $4,650,000 provides for accomplishing project condition surveys for projects where maintenance is not scheduled in the budget year. It also provides for Great Lakes water control monitoring.

State Project Name	OBLIGATIONS Estimated FY 1995 ($) Total (Operations) (Maintenance)	 Estimated FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for change in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000).
Project Condition Surveys	813,000 (813,000) (0)	760,000 (760,000) (0)	1. Decrease in number of projects surveyed in FY 96. 2. None.
Surveillance of Northern Boundary Waters	3,752,000 (3,752,000) (0)	3,890,000 (3,890,000) (0)	1. None. 2. None.
TOTAL PROTECTION OF NAVIGATION	4,565,000 (4,565,000) (0)	4,650,000 (4,650,000) (0)	
GRAND TOTAL-NORTH CENTRAL DIVISION	206,832,000 (81,910,000) (124,922,000)	211,129,000 (85,022,000) (126,107,000)	

APPROPRIATION TITLE: Operation and Maintenance - Major Rehabilitation - Locks and Dams (Navigation)

PROJECT: Mississippi River between Missouri River and Minneapolis, Minnesota, Locks and Dams Nos. 3, 5A, 6, 7, 8, and 9, Minnesota, Wisconsin and Iowa (Major Rehab)(Continuing)

LOCATION: Locks and Dams 3 and 5A-9 are located on the Mississippi River between river miles 797 and 648 and approximately between Red Wing, Minnesota and Prairie du Chien, Wisconsin.

DESCRIPTION: The original structures were placed in operation between 1936 to 1938. Each lock and dam consists of a lock (standard dimensions of 600 ft. long by 110 ft. wide), an uncompleted auxiliary lock, a dam consisting of movable gates to control river elevation, an earth embankment and an ungated overflow spillway. Work items under the major rehabilitation program are the replacement and/or refurbishing of the mechanical and electrical systems. This includes the machinery and control systems that operate the lock gates, the valves that control the level of water in the lock, and the movable gates of the dam.

AUTHORIZATION: River and Harbor Act of 1930.

REMAINING BENEFIT-REMAINING COST RATIO: The remaining benefit-remaining cost ratio is not applicable because monetary benefits have not been quantified.

TOTAL BENEFIT-COST RATIO: The total benefit-cost ratio is not applicable because monetary benefits have not been quantified.

INITIAL BENEFIT-COST RATIO: The initial benefit-cost ratio is not applicable because monetary benefits have not been quantified.

BASIS OF BENEFIT-COST RATIO: The basis for the benefit-cost ratio is not applicable because monetary benefits have not been quantified.

DIVISION: North Central

DISTRICT: St. Paul

Mississippi River between Missouri River and
Minneapolis, Minnesota, Locks and Dams Nos. 3,
5A, 6, 7, 8, 9, Minnesota, Wisconsin, and
Iowa (Major Rehabilitation)

SUMMARIZED FINANCIAL DATA

		Accum. Pct. of Est. Fed. Cost
Estimated Federal Cost	$59,100,000	
Estimated Non-Federal Cost	0	
Total Estimated Project Cost	$59,100,000	
Allocations to 30 September 1994	25,556,000	
Conference Allowance for FY 1995	6,200,000	
Allocation for FY 1995	4,643,000 1/	
Allocations through FY 1995	30,199,000	51
Allocation Requested for FY 1996	4,954,000	59
Programmed Balance to Complete after FY 1996	23,947,000	
Unprogrammed Balance to Complete after FY 1996	0	

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	45	Being Determined

PHYSICAL DATA

DAMS:	
Replace electrical systems	6 each
Replace/refurbish gate chains	29 each
LOCKS:	
Replace miter gate machinery	24 each
Replace tainter valve machinery	24 each
Replace electrical systems	6 each

1/ Reflects $144,000 reduction assigned as savings and slippage, and $1,413,000 reprogrammed from the project.

JUSTIFICATION: The mechanical and electrical systems of the locks and dams have reached or exceeded their useful life of 50 years. Breakdown of the electrical and mechanical equipment will become increasingly more frequent. Many of the mechanical components are custom made and a malfunction of any of the parts could shut down a lock for extended periods of time while replacement parts are being manufactured. A major failure of the mechanical system could close operation of the lock for 2 to 3 months. Frequent minor breakdowns which will close the lock for 2 to 3 days at a time are anticipated. Annual navigation benefits total $ 9,963,000.

DIVISION: North Central

DISTRICT: St. Paul

Mississippi River between Missouri River and
Minneapolis, Minnesota, Locks and Dams Nos. 3,
5A, 6, 7, 8, 9, Minnesota, Wisconsin, and
Iowa (Major Rehabilitation)

FISCAL YEAR 1996: The requested amount of $4,954,000 will be applied as follows:

Continue: Lock Work, electrical systems improvements and lock machinery replacement	$1,480,000
Continue: Dam Work, bulkhead hoist system, electrical system and gate chains improvements	2,840,000
Planning, Engineering, and Design	390,000
Construction Management	244,000
Total	$4,954,000

NON-FEDERAL COST: Not applicable.

STATUS OF LOCAL COOPERATION: Not applicable.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $59,100,000 is the same as the last estimate presented to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Assessment was prepared in June 1987. The Finding of No Significant Impact was signed in August 1987. The Final Programmatic Environmental Impact Statement Record of Decision was signed 28 July 1989.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1986.

Mr. MYERS. Thanks very much, Colonel Craig.

The thing that concerns all of us, and you have been here hearing some of the discussion, is the new criteria that is being proposed by the administration about the costs of projects, reversing the sponsors' share, and also the prospects of considering a difference in benefit-cost ratio, a two-to-one requirement, and the big one is that water must fall outside the State.

FORT WAYNE, INDIANA AND WEST DES MOINES, IOWA

Now, some of the projects that you cited here like Fort Wayne and Des Moines, certainly the water falls within the State in each of those cases. Will you just be dropping those after your preconstruction engineering and design?

Colonel CRAIG. On the Fort Wayne project we will continue, as that is in construction.

Mr. MYERS. It is under construction?

Colonel CRAIG. Mr. Myers, we will initiate construction this year. Since we have the funds for construction, we will complete construction on that project.

Mr. MYERS. I didn't mean to interrupt you, I apologize. If it is under construction this year, which I think makes sense, but I want it clear in my mind, if it starts construction or is under construction now, then you will continue?

Colonel CRAIG. We expect this project will go to construction in September and we expect to complete the construction under the policy as we understand it.

Mr. MYERS. Okay. Now——

Colonel CRAIG. And that is the same for the West Des Moines, Iowa project.

IMPACT OF NEW CRITERIA

Mr. MYERS. How many projects will be impacted by this criteria in your division?

Colonel CRAIG. In fiscal year 1996, we had two GI studies that were eliminated for about $150,000 impact and two Construction General projects were eliminated for $1,250,000. So we have about $1.4 million impact on the division in 1996.

GREAT FLOOD OF 1993

Mr. MYERS. Do you have some responsibility for some of the levee problems in the Upper Mississippi?

Colonel CRAIG. Yes.

Mr. MYERS. That were damaged in the 1993 flood?

Colonel CRAIG. Yes, sir. The Rock Island district and St. Paul district have levees that we have repaired since the 1993 flood.

Mr. MYERS. Are all those projects complete now?

Colonel CRAIG. Sir, there are 32 of those levee projects in the North Central Division. All of those projects are completed to the design level of protection. However, we have nine projects that require some minor additional repairs such as landscaping.

MC COOK AND THORNTON RESERVOIRS, ILLINOIS

Mr. MYERS. Now, McCook, which has been controversial, you have $11 million plus already appropriated, that is just for preconstruction and design and engineering, is that right?

Colonel CRAIG. Yes, sir. Basically for the Environmental Impact Statement and the Special Reevaluation Report.

Mr. MYERS. I understand there is still some compromise to be worked out. We discussed it a couple of weeks ago. How can you go ahead with the EIS when you don't know what the plan is going to be, what kind of compromise are you going to work out?

Colonel CRAIG. We are in a position of waiting for the local sponsor and the quarry owner to work out what the quarry will look like when the local sponsor takes control of it. However, there are some known things that we can continue to work on in engineering and design. There are some common configurations of the quarry we know will have to be reconfigured. So we are working on those and we are working with the local sponsor trying to get a negotiated plan from him and the quarry owner.

Mr. MYERS. That is the Chicago water district?

Colonel CRAIG. Metropolitan Water Reclamation District of Greater Chicago.

Mr. MYERS. And you are meeting with them and trying to work out the compromise?

Colonel CRAIG. We are offering anything that we can do, but it is really the local sponsor that has to be able to negotiate the plan with the quarry owner.

Mr. Myers, if I could add to that, we are prepared, once this negotiated plan or the mining plan is resolved, to immediately go to work and do whatever adjustments we have to in the Special Re-Evaluation Report and the EIS.

Mr. MYERS. It is a real problem, of course, for that area of Chicago. They have these heavy rains and then they have sewage backup in their basements, and you cited that in some of your illustrations here. But it seemed to me like somebody is dragging their feet up there.

What has caused this? Can you summarize briefly what our problem is here?

We had a compromise worked out three years ago. We didn't enter into the negotiations, but we all agreed to the compromise worked out, that they would dig out one pit, as I recall, build a tunnel underneath, and drain the water out of one into the other pit, and then—or pump it, I guess, and out the other.

What happened to that agreement that we all kind of signed on to?

That is why we appropriated the money, with the understanding that there was a compromise agreeable to all parties.

Colonel CRAIG. Yes, sir. For simplification, I will refer to that plan as the three-lobe plan; 27 billion gallons of flood storage under that expanded plan. We, the Corps, reacted to that expansion of the original authorized plan, which was 10 billion gallons in storage, one lobe. And we were prepared, the Corps was prepared, to put the Special Reevaluation Report and the Environmental Impact Statement out for public review last August.

However, the local sponsor experienced problems with concerns of the local surrounding communities, and felt that they did not have support for the expanded plan, and therefore went back to the original authorized plan of 10 billion gallons of flood storage.

Mr. MYERS. When we appropriated the money it was our understanding there had been a compromise worked out. So you somewhat reneged on our agreement, the understanding we had at the time, at least. I think the committee feels somewhat that we have been betrayed, that the agreement we worked out has now been changed.

I realize these things aren't popular, but I have heard from some of the area there that you never would be able to compromise, some of the constituency that is disagreeing to the compromise, the idea is not to have anything there, really they don't want a cesspool built in their community.

How much sludge that they keep talking about is really involved in the storage?

Colonel CRAIG. Mr. Myers, I don't have that information. I would have to provide that for record.

Mr. MYERS. If you could.

[The information follows:]

SLUDGE IN RESERVOIR

The reservoir will be cleaned following every storm event. The walls will be washed down during reservoir emptying and sediments will be mechanically removed. Therefore, there will be no sludge accumulation. An aeration system will be utilized to maintain aerobic conditions in the reservoir. A substantial amount of funds and engineering and design effort have been and will continue to be expended to develop the sludge removal, washdown, and aeration systems to minimize odor problems. Proper engineering and design of these project features is being given high priority by the Corps of Engineers.

Mr. MYERS. There seems to be a question of the sludge not being able to be pumped from one to the other.

FLOOD PROTECTION FOR COOK COUNTY, ILLINOIS

We are concerned, even though none of us here live in that area I live in the general area, within 125 miles, I know the area quite well and drive by quite frequently but it is a real problem for the 11 million people that live in that county, Cook County and the surrounding area, that are impacted by the floods. It is so flat there, there is no way for the water to get away. What is the status of the O'Hare storage? That takes care of the north part of Cook County.

Colonel CRAIG. That is correct. We are going to award the last contract for that project this year.

Mr. MYERS. When will it be functional?

Colonel CRAIG. We will complete construction in 1996, so it will be functional by then.

Mr. MYERS. Next year sometime?

Colonel CRAIG. Yes.

Mr. MYERS. In the meantime we have to pray it doesn't get heavy rain.

Colonel CRAIG. Yes, sir.

Sir, I would like to leave you with the vision that we are in fact working extremely hard to make this project come to fruition, but we have to be responsive to the changes in the local sponsors' desires.

Mr. MYERS. We are not faulting you, but we feel like somebody has changed the condition that we appropriated money for, because this is not a new issue that has been before us. Congressman Yates usually comes in and talks about this. He is in a markup right now, as are a great many people. In fact I think Mr. Knollenberg had planned to be here, but he is in a markup session. We are spread so thin this year, this new leadership we have on our side doesn't know how to handle the time very well.

I hope we have a lot of time to learn. The previous Chairman of this committee served for 18 years. I have told him his record is not under threat from me. I am not going to stay that much longer.

But anyway, I think I share the concern of many Members of the committee, and we are kind of concerned about this. Somebody up there, after they got the money, decided they wanted to play with their rules. I think we have to continue the compromise.

Mr. Bevill.

[CLERK'S NOTE.—A statement from the Honorable Sidney Yates follows:]

STATEMENT OF SIDNEY R. YATES

I am pleased to see that the Administration's fiscal year 1996 budget request includes construction funds for the McCook and Thornton Reservoir project. The local sponsor, the Metropolitan Water Reclamation District of Greater Chicago, is committed to this project and is prepared to provide all necessary local cooperation elements for the project.

I look forward to working with you to see this critical project through construction. The McCook Reservoir will save over $61 million annually in flood damages and stop flooding in 70,000 homes in the Chicago metropolitan area. This is a needed project and I am anxious to see it through.

I also strongly support efforts to renovate the revetments and other improvements along Lake Michigan's shoreline and I would urge the Corps to move quickly and work with the City of Chicago to complete these projects.

Mr. BEVILL. Well, Colonel, you have obviously taken your share of the cuts and put together a good program here for 1996. While you are on this Vulcan Materials issue, of course, their main office is in the State of Alabama, of course I am familiar with it, and Mr. Myers and I and Mr. Sid Yates, we are hoping, of course, that they do get this worked out, and we understand that the parties have told us this morning they are going to be getting together soon and work this out.

In the meantime, we may look into just holding the money in abeyance there on that project until it is worked out. Is that any problem for you?

Colonel CRAIG. There are some common design features that we can continue to do. I don't know how much money that is but I will provide it for the record.

Mr. BEVILL. Can you provide for the record how much money you would need to go on with it?

We feel like this is a matter that ought to be worked out, and that it will. As a matter of fact, the people were with Mr. Myers and I this morning and told us they were going to work this out. So we want them to have that opportunity. And I am sure you do.

Colonel CRAIG. Yes, sir.

[The information follows:]

DESIGN WORK ON MCCOOK IN FY 1996

The Corps would use carryover funds from FY 1995 for all work during FY 1996. The Corps would continue coordinating with both Metropolitan Water Reclamation District of Greater Chicago and Vulcan Materials Company during their negotiations. The District will continue to provide guidance to both parties regarding project design requirements and potential impacts of their negotiations on project design, cost and schedule. Until a single plan emerges, work on McCook Reservoir would be limited to design of construction features which would be common to any reservoir alternative under consideration.

Work on the Special Reevaluation Report and Environmental Impact Statement would continue at reduced rates pending resolution of real estate negotiations between the local sponsor and the quarry owner. Work on the Design Memorandum would be significantly reduced. Work on the Aeration System and the Gates and Valves Feature Design Memoranda would continue. Delay in real estate issue resolution will result in commensurate delays in completion of the SRR/EIS, Design Memorandum, execution of the PCA and ultimately construction contract award.

Some work effort would be shifted from the McCook Reservoir to the Thorton Reservoir. This will allow the Chicago District to make progress on this project and maintain design expertise which has been developed while working on the McCook project. Total expenditures in FY 1995 and FY 1996 will be approximately $6.5 million out of $11.5 million available. However, if real estate issues are resolved early in calendar year 1995, the entire $11.5 million will be fully utilized by the end of FY 1996.

GREAT LAKES CONNECTING CHANNELS AND HARBORS, REPLACEMENT LOCK

Mr. BEVILL. You won't have to dodge any bullets or anything when you get that worked out. Last year this committee appropriated $200,000 to begin the preliminary work for the new lock system in Sault St. Marie, Michigan.

Can you tell us how these funds are being used this year?

Colonel CRAIG. Yes, sir. We are going to initiate the Limited Reevaluation Report this year which will review the design, update the cost estimates and update the economics.

Mr. BEVILL. Can you tell us the estimated cost of reviewing the original cost estimates of this project?

Colonel CRAIG. This Limited Reevaluation Report cost is $600,000.

Mr. BEVILL. How much money would the Corps need in 1996 to complete this review?

Colonel CRAIG. We don't have an approved capability, but we could use $200,000 in 1996.

Mr. BEVILL. In addition to this?

Colonel CRAIG. In addition to the $200,000 we received in 1995, $200,000 in 1996 could be used.

Mr. BEVILL. This $200,000 we are talking about today?

Colonel CRAIG. Yes sir.

Mr. BEVILL. That is all I have.

Mr. MYERS. Well, thank you, Colonel.

We have some other questions that we will provide for the record. We appreciate your testimony this morning and the fine work you are doing up there.

Thank you.

[The information follows:]

GENERAL INVESTIGATIONS

POMME DE TERRE RIVER, MINNESOTA

Mr. MYERS. In addition to providing a basis on which the Corps of Engineers would issue general permits, will the Pomme de Terre River, Minnesota, project examine solutions to water resources problems that would require authorization of a new project?

Colonel CRAIG. Mr. Chairman, the Pomme de Terre River, Minnesota, study will be a coordinated watershed management study involving other Federal and State agencies to examine a variety of water resources problems and needs. The initial reconnaissance phase will look at the potential for water resource improvements that may require project authorization. We also believe there is potential for environmental enhancement opportunities and solutions to other water resource needs which will fall within the purview and capabilities of local and State governmental units for implementation.

LOWER KINNICKINNIC RIVER, MILWAUKEE, WISCONSIN

Mr. MYERS. What were the results of the Lower Kinnickinnic River, Milwaukee, Wisconsin, project?

Colonel CRAIG. Sir, we completed the reconnaissance study in December 1994. The reconnaissance study determined that a project to deepen the Lower Kinnickinnic River in the interest of commercial navigation could not be economically justified. The Milwaukee Port Authority was an active participant in the study and has concurred in the report findings.

DES PLAINES RIVER, ILLINOIS

Mr. MYERS. What is the reason for the delay in completion of the Des Plaines River, Illinois, feasibility study?

Colonel CRAIG. Mr. Myers, the State of Illinois, a cost sharing partner on this study, requested that a hydrology model of the basin developed by the State be used in the study, which would also form the basis for the State's flood plain regulatory program. It was necessary to delay the Des Plaines study until basin hydrology could be modified so that it was acceptable to all parties, not only for hydrology by the State, but hydraulic design by the Corps.

FLOOD PLAIN MANAGEMENT ASSESSMENT

Mr. MYERS. What can you tell us at this point about the findings of the Flood Plain Management Assessment of the Upper Mississippi River and Lower Missouri Rivers and Tributaries study which is scheduled to be completed this June?

Colonel CRAIG. Mr. Chairman, a draft report is scheduled to be completed by the end of March. The Flood Plain Management Assessment will be responsive to the objectives provided by Congress, while complementing other studies, such as the Interagency Floodplain Review Committee.

The Assessment is primarily focusing on a comparison of impacts and costs of implementing a wide array of alternative policies, programs, and structural and non-structural measures, assuming they had been in place at the time of the 1993 midwest flood. The structural alternatives range from assuming levees were constructed high enough to contain the 1993 event to what would have happened if levees were removed. These analyses required hydraulic modeling on the main stems of the upper Mississippi and lower Missouri Rivers, analysis of economic and environmental data for the study area, and examination of the effects of tributary watershed measures.

Preliminary findings are that the floodplain wetlands have little affect on flood stages. Further restoration of upland wetlands would have localized benefits but would have had little affect on the 1993 flooding in the main stem floodplain. Much of the 1993 damages were not related to overbank flooding but were agricultural damages due to saturated soils caused by interior ponding and high ground water tables.

Mr. MYERS. Are any follow-on activities planned following completion of the initial study?

Colonel CRAIG. No, sir. However, the assessment will provide insights into which models and studies should be pursued in further detail by local, state, and other Federal agencies to best support wise floodplain management decisions.

SOUTHEAST CHICAGO, ILLINOIS

Mr. MYERS. Why is it taking so long to complete the reconnaissance study for the Southeast Chicago, Illinois, project?

Colonel CRAIG. Sir, due to the complexity of the problems within the highly urbanized study boundaries, the involvement of a large number of political jurisdictions, and local initiatives which occurred subsequent to submission of the original study schedule, we have had to reassess the study scope and schedule. After extensive coordination with local governmental agencies and reanalysis and prioritization of the problem areas, we determined that the reconnaissance study could require up to 18 months instead of the normal 12 months to complete. The request for approval to extend the schedule is presently pending at our higher headquarters.

MISSISSIPPI RIVER LEVEES, IOWA, ILLINOIS, AND MISSOURI

Mr. MYERS. Who will the local sponsor be for the Mississippi River Levees, Iowa, Illinois and Missouri, study?

Colonel CRAIG. Mr. Chairman, if we had found any potentially feasible alternatives, the sponsors would have been the specific levee and drainage districts, or tax-levying entities.

Mr. MYERS. When is the feasibility cost-sharing agreement scheduled to be completed?

Colonel CRAIG. Sir, the reconnaissance report will not recommend continuation of this study into the feasibility phase since policy cites local interests as responsible for shoreline protection as part of their operation and maintenance obligation. Therefore, we will not proceed to a Feasibility Cost Sharing Agreement.

LITTLE CALUMET RIVER BASIN
DYER, INDIANA

Mr. MYERS. Last year, you reported that the reconnaissance report for the Little Calumet River Basin, Dyer, Indiana, project would be completed in June of this year. Why will it take until March of next year to complete the reconnaissance phase?

Colonel CRAIG. Mr. Chairman, the reconnaissance report will be completed in June 1995 as indicated in last year's testimony. The original schedule for completion of the reconnaissance phase, however, was overly optimistic and not executable. The revised schedule for completion of the Project Study Plan and negotiation of the Feasibility Cost Sharing Agreement has therefore been extended from December 1995 to March 1996.

Mr. MYERS. Who is the local sponsor for this study?

Colonel CRAIG. Sir, the local sponsor has not yet been formally determined. However, the town of Dyer, Indiana would be the most likely sponsor. Dyer officials will likely express their views upon completion of the reconnaissance report.

CROOKSTON, MINNESOTA

Mr. MYERS. Why has the cost of the Crookston, Minnesota, feasibility study nearly doubled since last year?

Colonel CRAIG. Mr. Myers, the feasibility cost increased from $684,000 to $1,174,000 due to three new project features that are feasible and worthy of detailed design beyond the original scope of the study. These features include two additional levee reaches and a road raise.

Mr. MYERS. Have the local sponsors agreed to pay the additional $245,000 for their share of the study cost?

Colonel CRAIG. Yes, Mr. Chairman. The local sponsor has expressed support for the expanded scope of study, and has agreed to the increase in the feasibility study cost.

ONONDAGA LAKE MANAGEMENT CONFERENCE

Mr. MYERS. The funds requested for the Onondaga Lake, New York, project will be used "to participate in the Management Conference activities, including attending conference, committee, and working group meetings." How many of your employees are involved in this activity?

Colonel CRAIG. Sir, the Buffalo District Commander, representing the Division Commander, attends periodic conference meetings. There are generally up to four other District employees involved; Project Manager, Technical Manager, a representative to the Conference's Technical Review Committee, and one representative to the working group. As special working groups or working committees are formed by the Conference to study selected issues, additional employees with appropriate expertise are assigned as required.

Mr. MYERS. Other than attending meetings, what role does the Corps play in implementing the Management Plan?

Colonel CRAIG. Mr. Chairman, the Corps of Engineers is working with other Management Conference members to prepare "Requests for Proposals" for studies and projects, to review and comment upon proposals, and to provide technical review of completed study reports, design reports, or plans and specifications. The Corps continues to support development of annual Onondaga Lake Management Conference budgets and to participate in the selection and prioritization of work items that will implement the Management Plan. The Corps is designing a demonstration dredging project in the Inner Harbor with funds appropriated by Congress. The Corps is negotiating with Onondaga County to design a Combined Sewer Overflow abatement demonstration project. Two other water quality improvement demonstration projects have been proposed by Onondaga County and the City of Syracuse for design by the Corps.

Mr. MYERS. What justification is there for the Federal Government to be involved in this activity?

Colonel CRAIG. Sir, the Congress created the Onondaga Lake Management Conference in 1990, in Public Law 101-596, Section 401, and charged it with development of a comprehensive management plan to identify the causes of poor water quality of Onondaga Lake, develop a plan to improve the lake, and oversee the implementation of that plan. As part of the authorizing language establishing the Management Conference, the Congress directed the involvement of several Federal agencies to include the Corps of Engineers. However, the Army has not budgeted for efforts other than to support the Conference activities since single purpose water quality projects are considered lower priority work.

DEVILS LAKE, NORTH DAKOTA

Mr. MYERS. Why is the Devils Lake, North Dakota, feasibility study being performed in stages?

Colonel CRAIG. Mr. Myers, the Devils Lake feasibility study is being conducted in two stages. The initial stage was intended to resolve hydrologic, economic, and water quality issues to determine if there is at least one justified plan. Resolution of these issues is required prior to proceeding into the second phase, which is a comprehensive feasibility study.

Mr. MYERS. When will the results of the first phase be available?

Colonel CRAIG. Mr. Myers, initial results were issued on October 7, 1994 in a report to State and local interests titled "Stage 1A - Issues Resolution Conference Agenda and Background Information."

Mr. MYERS. Is there anything you can tell us at this point about the results of the first phase of the study?

Colonel CRAIG. Mr. Chairman, the first phase did not identify a flood control alternative that was economically justified and environmentally acceptable and, therefore, did not satisfy administrative policy for proceeding into the second phase of the feasibility study. However, as a result of a February 6, 1995 meeting of State officials, Congressional representatives, and the Corps the Corps is considering a request to provide leadership in developing an interagency collaborative approach to considering all benefits. We expect HQUSACE guidance soon on development of a scope of work for these studies with remaining cost-shared feasibility funds.

CHICAGO RIVER, NORTH BRANCH, ILLINOIS

Mr. MYERS. What is the status of the Chicago River North Branch, Illinois study?

Colonel CRAIG. Mr. Chairman, the draft reconnaissance report is complete and the Corps is prepared to initiate the feasibility study. However, the local sponsor, the City of Chicago, has requested that the study be put on hold until completion of the dredged material management study for maintenance of the existing navigation channel which will define the disposal facility parameters, to include the incremental disposal requirements from this project.

FREEPORT, ILLINOIS

Mr. MYERS. What are the conclusions of the Freeport, Illinois, reconnaissance report?

Colonel CRAIG. Sir, the reconnaissance report recommends proceeding to the feasibility phase of the study. The Feasibility Cost Sharing Agreement is scheduled for execution in March 1995 with the City of Freeport.

SNY ISLAND, ILLINOIS

Mr. MYERS. Is the Sny Island, Illinois, study duplicating work that is being undertaken under the Mississippi River Levees study?

Colonel CRAIG. No, sir, there is no duplication of effort. The Sny Island Levee Drainage District reconnaissance study, recently initiated, will address flood damage reduction measures. The focus of this study is to investigate the feasibility of providing a higher level of protection to the existing flood control system. The Mississippi River Levees Study, now nearing completion of its reconnaissance study, is examining shoreline erosion along eight Upper Mississippi River Federal levee systems, one of which is the Sny Island project.

CHICAGO SHORELINE, ILLINOIS

Mr. MYERS. Is the Chicago Shoreline, Illinois project authorized for construction?

Colonel CRAIG. No, sir, the Chicago Shoreline, Illinois project is not authorized for construction.

Mr. MYERS. Doesn't preconstruction engineering and design normally end when plans and specifications for a project's first construction contract are completed?

Colonel CRAIG. Yes, Mr. Chairman, that is correct. However, on the Chicago Shoreline project General Investigations funds have been requested in the FY 1996 budget to continue engineering and design activities beyond the first construction contract. However, this project will not be budgeted for a construction new start based on the Administration's new policy.

Mr. MYERS. When will PED for this project be complete?

Colonel CRAIG. Mr. Myers, the PED phase is scheduled to be completed in September 1995.

LAKE GEORGE, HOBART, INDIANA

Mr. MYERS. What is the status of the Lake George, Hobart, Indiana, project?

Colonel CRAIG. Mr. Chairman, work on the draft planning and engineering report will be completed in April 1995. After review by my office, the report will be distributed for public review.

LITTLE CALUMET RIVER BASIN (CADY MARSH DITCH), INDIANA

Mr. MYERS. What is the status of the Little Calumet River Basin (Cady Marsh Ditch), Indiana, project?

Colonel CRAIG. Mr. Chairman, an analysis of alternative construction techniques to install the proposed diversion pipe system along Aborgast Avenue in the City of Griffith will be completed in March 1996, after which the results will be discussed with the local interests. Once a construction approach is agreed upon, detailed design and work on the General Design Memorandum will be resumed.

ST. JOSEPH RIVER, SOUTH BEND, INDIANA

Mr. MYERS. What is the status of the St. Joseph River, South Bend, Indiana, study?

Colonel CRAIG. Sir, the reconnaissance study was completed in May 1994. The study recommended no further action due to a lack of economic justification. House report language in FY 1994 directed the Corps to prepare a Comprehensive Riverfront Master Plan. The Master Plan was completed and provided to the Indiana University South Bend in September 1994. With appropriated funds in FY 1995 the Corps has initiated design of selected elements of the master plan. Two Architect/Engineer contracts will be awarded and the design is expected to be completed by December 1995.

FOX RIVER, WISCONSIN

Mr. MYERS. Have you had any success in transferring the Fox River, Wisconsin system to local interests?

Colonel CRAIG. No, sir. Negotiations to transfer the navigation portion of the system to the State of Wisconsin concluded in July 1994 without an agreement. The State felt the cash settlement was inadequate. However, the Corps will continue to pursue the transfer with the State of Wisconsin.

GREEN BAY LEVEE AND DRAINAGE DISTRICT NO. 2, IOWA

Mr. MYERS. Why have no funds been requested to continue the Green Bay Levee and Drainage District No. 2, Iowa, project?

Colonel CRAIG. Mr. Chairman, our economic evaluation of this project indicates a benefit-to-cost ratio substantially below 1.0 resulting in no further Federal interest.

ILLINOIS SHORELINE EROSION, INTERIM IV

Mr. MYERS. What is the status of the Illinois Shoreline Erosion, Interim IV, feasibility study?

Colonel CRAIG. Mr. Chairman, the feasibility report is proceeding on schedule. A draft report is scheduled for completion in June 1995.

CONSTRUCTION GENERAL

UPPER MISSISSIPPI RIVER SYSTEM ENVIRONMENTAL MANAGEMENT PROGRAM

Mr. MYERS. Who are the non-Federal sponsors for the Upper Mississippi River System Environmental Management Program?

Colonel CRAIG. Mr. Chairman, the states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin through their respective natural resource agencies are the non-Federal sponsors.

Mr. MYERS. What are the fixed cost ceilings for the program?

Colonel CRAIG. Mr. Chairman, the Water Resources Development Act of 1986, Public Law 99-662, authorized annual fixed funding ceilings of $19,455,000 for the Upper Mississippi River System Environmental Management Program.

LOVES PARK, ILLINOIS

Mr. MYERS. Last year you indicated that allocations through the end of fiscal year 1994 for the Loves Park, Illinois, project would be $7,132,000. This year, you indicate that only $5,040,000 was allocated through the end of fiscal year 1994. Please explain the discrepancy.

Colonel CRAIG. Sir, the actual allocations through FY 1994 were $5,049,000. The difference of $2,083,000 was due to reprogramming actions during the year to move excess funds from the Loves Park project to other projects within the Division that had fund shortages. This was done to maximize the utilization of available funds. Funds were excess to Loves Park in FY 1994 because of rights-of-way acquisition difficulties experienced by the local sponsor which delayed award of a major construction contract.

McCOOK RESERVOIR, ILLINOIS

Mr. MYERS. What is the schedule for award of the first construction contract for the McCook Reservoir project in Illinois?

Colonel CRAIG. Sir, due to the uncertainty in the conceptual design of the latest Vulcan alternatives and the duration of the associated review and approval procedures for the Special Reevaluation Report, Environmental Impact Statement, Design Memorandum, and Project Cooperation Agreement the award of the first construction contract is indeterminate at this time.

Mr. MYERS. Have you done an analysis of the impact the loss of the McCook quarry will have on the cost of construction in the Chicago metropolitan area?

Colonel CRAIG. Sir, a qualitative analysis has revealed that under favorable market conditions it would be reasonable to assume that the cost of materials would increase if the quarrying operations at McCook should cease. This impact will be discussed in the Special Reevaluation Report and Environmental Impact Statement.

Mr. MYERS. Have you fully examined alternatives to the use of the McCook quarry?

Colonel CRAIG. Yes, sir, numerous alternatives were examined during the original feasibility report phase completed in 1986. Additional alternatives were reviewed during preparation of the Special Reevaluation Report and Environmental Impact Statement. Recently, the Vulcan Materials Company, the quarry owner, requested that several more reservoir alternatives be investigated. All of these alternatives will be discussed in the Special Reevaluation Report and Environmental Impact Statement.

Mr. MYERS. Based on current schedules, when would the quarry owner have to abandon the site?

Colonel CRAIG. Sir, due to ongoing negotiations between the quarry owner and the local sponsor the date on which the owner would have to abandon the site cannot be determined. However, even if the owner is required to abandon pit mining operations in the main lobe, open pit mining in the Flux Lobe, Plant Area, and Hodgkins Area of the Vulcan Quarry, as well as underground mining, could be undertaken for many years.

LITTLE CALUMET RIVER, INDIANA

Mr. MYERS. Please explain the design changes that have caused the total cost of the Little Calumet River, Indiana project to increase by almost $16,000,000?

Colonel CRAIG. Mr. Chairman, the increase of $15,716,000 is due to the need to replace existing pumps at 14 pumping stations because of their limited remaining service life, design requirements that necessitate the renovation of the discharge lines at 10 pumping stations to prevent backflow during river flood stages and altering the design of the new levees in the west project reach so as to provide a continuous line of protection during construction while the existing spoil bank levees are replaced.

MUSCATINE ISLAND, IOWA

Mr. MYERS. Do you still expect the project cooperation agreement for the Muscatine Island, Iowa, project to be executed this May?

Colonel CRAIG. Yes, sir. The City Council of Muscatine, Iowa has endorsed the Draft PCA. Execution of the PCA is scheduled for May 1995.

BALDHILL DAM, NORTH DAKOTA (DAM SAFETY)

Mr. MYERS. Have you developed a schedule for completion of the Baldhill Dam Unit of the Sheyenne River, North Dakota, project?

Colonel CRAIG. Sir, there is no completion date for the Baldhill Dam project, or for many other projects, because reduced budget and outyear ceilings were received from OMB on January 19, 1995, shortly before the printing deadline for justification materials to meet the February 6, 1995 release date for the FY 1996 budget. Completion dates will be established after full evaluation of options for meeting outyear budget targets.

HOMME DAM, NORTH DAKOTA (DAM SAFETY)

Mr. MYERS. What is the source of the $290,000 reprogrammed to the Homme Dam, North Dakota, project in fiscal year 1995.

Colonel CRAIG. Mr. Chairman, the source of the reprogramming action was the Rochester, Minnesota flood control project which had surplus funds due to good bids.

Mr. MYERS. It is the policy of the Committee not to permit the initiation of new activities through reprogramming actions. Why wasn't the Committee advised of this reprogramming?

Colonel CRAIG. Mr. Chairman, in FY 1986, 1987 and 1988, Congress appropriated $50 million under the Construction General account for unspecified Dam Safety Assurance new start projects with the expectation that the Corps would initiate construction for such projects as soon as possible after the applicable reconnaissance reports were reviewed and approved by the Assistant Secretary of the Army (Civil Works) (ASA(CW)). Most of these funds were revoked to compensate, in part, for the large reductions for savings and slippages and prior year unobligated balances in FY 1988 thru FY 1992. After dam safety reconnaissance reports were approved by the ASA(CW), as the Homme Dam report was on August 25, 1994, Headquarters reprogrammed funds to start work on these projects and included them in the President's budget at the earliest opportunity. This practice is in accordance with the purpose for which the dam safety assurance program funds were budgeted and appropriated as well as the Corps normal reprogramming criteria. Funds in the amount of $2,000,000 for the dam safety assurance program are included in the President's FY 1996 budget for new starts which may be approved by the ASA(CW) as a result of dam safety studies now underway. Without such flexibility for this program, dam safety assurance projects, such as Homme Dam, would have to wait as long as two years for construction funding through the formal budget process.

LOCK AND DAM 13, MISSISSIPPI RIVER, ILLINOIS
(MAJOR REHABILITATION)

Mr. MYERS. Please provide the Committee with a status report on the major rehabilitation project at Lock and Dam 13 on the Mississippi River.

Colonel CRAIG. Sir, the project received new start funding in FY 1993. The construction was 25 percent complete on January 1,1995, will be 86 percent complete on September 30, 1995. The overall project is scheduled for completion in September 1996.

LOCK AND DAM 15, MISSISSIPPI RIVER, ILLINOIS
(MAJOR REHABILITATION)

Mr. MYERS. Please provide the Committee with a status report on the major rehabilitation project at Lock and Dam 15 on the Mississippi River.

Colonel CRAIG. Sir, the project received new start funding in FY 1993. The project was 83 percent on January 1,1995, and will be 90 percent complete on September 30,1995. The overall project is scheduled for completion in September 1996.

O'HARE RESERVOIR, ILLINOIS

Mr. MYERS. What is the status of the O'Hare Reservoir project in Illinois?

Colonel CRAIG. Mr. Myers, the project is approximately 60 percent complete. The final construction contract will be advertised in FY 1995. The project will be physically completed and ready for use in December 1996.

CASINO BEACH, ILLINOIS

Mr. MYERS. What is the status of the Casino Beach, Illinois, project?

Colonel CRAIG. Sir, the first phase of the project is scheduled to be advertised for construction bids in mid-March 1995 with a contract award in mid-May 1995.

OPERATION AND MAINTENANCE

INLAND ROUTE, MICHIGAN

Mr. MYERS. Please provide the Committee with a status report on your negotiations with the State of Michigan regarding the lock on the Inland Route project.

Colonel CRAIG. Sir, negotiations have been delayed until now to allow the State to gain experience in operating the lock facility before proceeding with negotiations for transfer. The Michigan Department of Natural Resources has been operating the lock under a long-term lease agreement with the Corps since 1990 in order to gain that experience. Negotiations with the State of Michigan are scheduled to begin this summer on transfer of the responsibility for the entire Inland Route project to the State. Should an agreement in principle be reached, a report of negotiations will be prepared to close out the Section 216 study process and obtain Congressional approval.

TOLEDO LONG-TERM MANAGEMENT STRATEGY, OHIO

Mr. MYERS. Please provide the Committee with a status report on your efforts to resolve dredged material disposal problems for the Toledo Harbor, Ohio project.

Colonel CRAIG. Sir, the Corps is working with the Toledo Harbor Planning Group, consisting of Federal, State and local agencies, to resolve dredged material disposal problems at this project. The draft Phase 3 Report by the Toledo Harbor Planning Group on the Long-Term Sediment Management Strategy, dated September 1994, is now under review. The report tasks policy issues to agency headquarters concerning future cost and disposal options.

The Phase 3 Report recommends execution of a 5-year interim plan calling for (1) continued disposal of dredged material in existing confined disposal facilities and the open lake and (2) detailed studies and design leading to development of the final long-term sediment plan. The Corps is proceeding on the tasks identified in the report that can be accomplished under current guidance, such as monitoring open lake disposal of polluted sediments and developing contracts for removing sediments from a Confined Disposal Facility. The review is anticipated to be complete in March 1995.

SURVEILLANCE OF NORTHERN BOUNDARY WATERS

Mr. MYERS. Please describe the work that is accomplished under the Surveillance of Northern Boundary Waters activity.

Colonel CRAIG. Sir, with the funds provided under the Surveillance of Northern Boundary Waters the Corps monitors water levels and flows in the Great Lakes, their connecting channels, diversions, and the St. Lawrence River and gathers hydrometeorologic and Geographic Information Systems data in the 300,000 square miles of the Great lakes basin. This information is used to develop studies, models and action plans related to oil spills, ice jams and winter monitoring, extreme lake levels as well as lake regulation.

Mr. MYERS. Why is this work necessary?

Colonel CRAIG. Mr. Chairman, the Corps has, as part of its mission, a requirement to coordinate international data with Canada to regulate the outflows of Lakes Superior and Ontario, preserve the utility and maintenance of the Niagara River and support the International Joint Commission in carrying out the purposes of the Boundary Water Treaty of 1909, and all subsequent treaties since. In that capacity, the Corps of Engineers along with the Canadian Counterparts, participate on the International Joint Commission Board of Control. The North Central Division Commander is the U.S. Chair/U.S. Member of the International Lake Superior, Niagara and St. Lawrence River Board of Control, and the International Niagara Committee. The St. Paul District Commander is the U.S. Chair/U.S. Member of the International Lake of the Woods, Rainy Lake, and Souris River Boards of Control.

We also provide forecasts of lake levels and channel depths in support of riparian, industrial, commercial navigation and recreational boating, hydropower and environmental interests, as well as other Federal, State, local government agencies and the general public.

ADDITIONAL QUESTIONS FROM MR. MYERS

BURNS WATERWAY HARBOR, INDIANA (MAJOR REHAB)

Mr. MYERS. The budget request includes $4,000,000 to continue work on the Burns Waterway Harbor major rehabilitation project in Indiana. What work do you expect to accomplish in fiscal year 1996?

Colonel CRAIG. Sir, construction of the segmented reef breakwater will be continued. The project will be 33 percent complete at the end of FY 1996.

Mr. MYERS. Is the amount requested your full capability for the project in fiscal year 1996?

Colonel CRAIG. Yes, sir. The capability amount is the same as the budgeted amount for this project.

McCOOK AND THORNTON RESERVOIRS, ILLINOIS

Mr. MYERS. What is the status of negotiations between the owner of the McCook quarry and the local sponsor for the McCook and Thornton Reservoirs in Illinois?

Colonel CRAIG. Sir, in October 1994, the Board of Commissioners of the Metropolitan Water Reclamation District of Greater Chicago withdrew its support for the "Staged Reservoir Plan" which Vulcan Materials Company and MWRDGC staffs had been negotiating for several years. Vulcan and MWRDGC had several discussions during November - December 1994 regarding other reservoir proposals. No agreement has been reached on any additional alternative plans.

FORT WAYNE, INDIANA

Mr. MYERS. The budget request contains $4,000,000 to continue construction of the Fort Wayne Indiana, project. What is the current schedule for completion of that project?

Colonel CRAIG. Sir, there is no completion date for the Fort Wayne project, or for many other projects, because reduced budget and outyear ceilings were received from OMB on January 19, 1995, shortly before the printing deadline for justification materials to meet the February 6, 1995 release date for the FY 1996 budget. Completion dates will be established after full evaluation of options for meeting outyear budget targets.

Mr. MYERS. Is the amount requested your full capability for the project in fiscal year 1996?

Colonel CRAIG. Yes, sir, the budget request of $4,000,000 is our full capability.

THURSDAY, FEBRUARY 23, 1995.

NEW ENGLAND DIVISION

WITNESSES

COL. EARLE C. RICHARDSON, DIVISION ENGINEER
ROBERT H. BYRNE, JR., CHIEF, PROGRAMS MANAGEMENT DIVISION
DAVID J. GOODRICH, ASSISTANT CHIEF, PROGRAMS MANAGEMENT DIVISION

OPENING REMARKS

Mr. MYERS. Colonel Richardson, we are pleased to welcome you before the committee this morning. This is your first appearance before this committee in this capacity, isn't it?

Colonel RICHARDSON. Yes, sir.

Mr. MYERS. We welcome you and wish you well. It is a tough area up there, a lot of problems. I know every area has problems, but you particularly have had some the rest of the country has not experienced.

We are pleased to have you and your entire statement will be in the record. You may continue as you care to.

Colonel RICHARDSON. Thank you, Mr. Chairman, Mr. Bevill. I am honored to appear before you to report on the Corps' civil works program in New England and to present our budget request for fiscal year 1996.

Accompanying me today is Mr. Bobby Byrne, and our lead programmer, Mr. Dave Goodrich, is on my left. Both of these individuals are outstanding and exceptional professionals serving our Nation extremely well.

Mr. MYERS. We are pleased to have them.

AREA OF RESPONSIBILITY

Colonel RICHARDSON. The New England Division's geographic area of civil works responsibility is the six-state New England region. Thirteen million people reside in this 66,000 square mile area. We have more than 170 completed navigation projects, including 11 deep draft harbors along our 6,100 miles of coastline.

The Cape Cod Canal, the world's widest sea level canal, provides safe passage to more than 18,000 vessel transits each year. Also meeting the needs of the region are 134 completed flood control and storm damage prevention projects. These include 36 dams, 5 hurricane protection projects, and 93 local protection projects.

OUTLINE

I would like to briefly highlight our fiscal year 1994 program execution and then present the Division's budget request for fiscal year 1996.

PROGRAM EXECUTION

In fiscal year 1994 we executed 62 percent of our $3.3 million General Investigations program. In essence, the performance reflects the effort it sometimes takes to coordinate with project sponsors the scope of studies and the development of cost sharing agreements. All studies which were part of the program are completed or are now underway.

We executed 57 percent of our $16.8 million Construction General program. Delays on two of our larger projects impacted this program. In one case, work did not progress as expected for various reasons, including a strike, and in the other we were forced to delay contract award in order to develop additional information supporting the preparation of plans and specifications.

We have developed an achievable fiscal year 1995 program and our budget request together with programmed carryover creates an executable program for fiscal year 1996.

FISCAL YEAR 1996 PROGRAM REQUEST

The New England Division fiscal year 1996 budget request is $29.9 million which, together with a fiscal year 1995 programmed carryover of $4.2 million, amounts to a total program of $34.1 million. This represents approximately one-fourth of the Division's total projected workload.

GENERAL INVESTIGATIONS

The General Investigations program request of $550,000 is for two studies and preconstruction engineering and design for one project.

CENTRAL CONNECTICUT COASTAL AREA

We are in the process of completing the reconnaissance phase of our study to evaluate measures to reduce flooding impacts along the central Connecticut coastal area. Flooding along this reach is caused by hurricanes and coastal storms. The most recent storm, in December 1992, caused over $60 million in damages along the Connecticut coast. Fiscal year 1996 funds will be used to continue this study.

BLACKSTONE RIVER WATERSHED RESTORATION

The fiscal year 1996 request includes $300,000 to initiate a reconnaissance study of measures to restore fish and wildlife habitat in the Blackstone River watershed in Massachusetts and Rhode Island. The environment of the Blackstone River has suffered from years of industrial development in the basin and now represents the largest source of pollutants discharging into Narragansett Bay.

PRECONSTRUCTION ENGINEERING AND DESIGN

The request of $185,000 for preconstruction engineering and design will complete the design of the Boston Harbor, Massachusetts project.

BOSTON HARBOR, MASSACHUSETTS

This $35 million project would deepen existing channels in the Mystic River and Reserved Channel to 40 feet and in the Chelsea River to 38 feet. When completed, the project will make the harbor more accessible and increase efficiency of port operations.

CONSTRUCTION, GENERAL PROGRAM

Our construction budget request of $990,000, together with a fiscal year 1995 programmed carryover of $4.2 million, will provide for continuation of the Town Brook flood protection project in Quincy and Braintree, Massachusetts.

TOWN BROOK, QUINCY AND BRAINTREE, MASSACHUSETTS

We have completed our first contract, improving 1700 feet of channel and have underway a second contract for $16.9 million to construct a 4,000-foot floodwater diversion tunnel, 190 feet below the city. Six-hundred feet of the tunnel have been completed. Funds requested in fiscal year 1996, together with the programmed carryover funds, will allow us to complete the tunnel and initiate contract work for reconstruction of the Old Quincy Dam and Reservoir.

OPERATION AND MAINTENANCE, GENERAL

Our Operation and Maintenance budget request is $28.3 million. A total of $15.1 million requested for navigation will provide for dredging of five projects, repairs to two breakwaters, operation and maintenance of the Cape Cod Canal, and condition surveys of 38 harbors.

Our request of $13.2 million for flood control will be used for the operation and maintenance of 31 flood control reservoirs and two hurricane barriers. Additionally, 92 local protection projects throughout the New England area will be inspected.

SUMMARY

Mr. Chairman, that concludes my status report. I would be pleased to answer any questions.

[The biographical sketch and prepared statement of Colonel Richardson follow:]

US Army Corps of Engineers
New England Division

Biography

Colonel Earle C. Richardson

Commander and Division Engineer

Colonel Earle C. Richardson assumed command of the New England Division on August 2, 1994 following a two-year tour as Commander and District Engineer of the U.S. Army Corps of Engineers' Huntington District in West Virginia. In managing the Corps' responsibility in the six-state New England region,Colonel Richardson supervises a workforce of over 640 and an annual budget of approximately $150 million.

Current Corps water resource programs in the region deal primarily with flood control; navigation; water supply; operation and maintenance of completed projects, including the Cape Cod Canal; and the regulation of activities affecting waters and wetlands. The Division, headquartered in Waltham, Massachusetts, is also involved in a myriad of environmental restoration programs, hurricane and shoreline protection, and studies concerning water supply and quality, dredge material disposal, low flow augmentation, and comprehensive studies of New England river basins. The New England Division also accomplishes a large and diverse program of work for other federal agencies, primarily in support of the U.S. Environmental Protection Agency's Superfund Program.

Commissioned through the Reserve Officers Training Corps, Colonel Richardson has served in a variety of command and staff assignments during his 26-year military career, both in the United States and overseas. He served two tours with the 249th Engineer Battalion in Karlsruhe, West Germany, first as platoon leader and company commander and later as the Battalion Commander. He also served as an Engineer Advisor with MACV III Corps in Bien Hoa, Vietnam. His staff assignments have included Chief, Operating Forces Division in the Assistant Secretary of the Army's office at the Pentagon; as Assistant Engineer with the Portland (Oregon) District; Civil Engineer and then Deputy Director for Facility Engineering at Fort Bliss, Texas; Engineer Staff Officer with the Deputy Chief of Staff for Engineering at Army Headquarters in Heidelberg, West Germany; Operations Officer for the 79th Engineer Battalion in Karsruhe, West Germany; and as Program and Budget Officer, Deputy Chief of Staff for Personnel, Administration and Logistics with the U.S. Army Training and Doctrine Command at Fort Monroe, Virginia.

The native New Englander holds Bachelor and Master of Science degrees in Civil Engineering from the University of Massachusetts. He has attended numerous military schools including the Basic and Advanced Engineer Officer courses; U.S. Army Command and General Staff College; Military Comptroller School; Planning, Programming and Budgeting System School, and the U.S. Army War College. A Registered Professional Engineer in Oregon, Colonel Richardson is Ranger and Airborne qualified.

His awards and decorations include the Legion of Merit, the Bronze Star Medal, the Meritorious Service Medal, the Air Medal, the Army Commendation Medal, the National Defense Service Medal and the Vietnam Service Medal.

Colonel Richardson and his wife, the former Linda Manning of North Carolina, are the parents of Clayton and Kristin Richardson. The family resides at Fort Devens, Massachusetts.

8/94

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS

NEW ENGLAND DIVISION

COMPLETE STATEMENT

OF

COLONEL EARLE C. RICHARDSON

COMMANDER, NEW ENGLAND DIVISION

BEFORE THE

SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT

COMMITTEE ON APPROPRIATIONS

UNITED STATES HOUSE OF REPRESENTATIVES

ON THE

FISCAL YEAR 1996 CIVIL WORKS BUDGET

STATUS REPORT ON CIVIL WORKS ACTIVITIES
IN THE NEW ENGLAND DIVISION
FISCAL YEAR 1996
COLONEL EARLE C. RICHARDSON, DIVISION ENGINEER

Mr. Chairman and distinguished members of the committee, I am Colonel Earle Richardson, the Division Engineer for New England. I am honored to appear before you to report on the Corps' civil works program in New England and to present our budget request for Fiscal Year 1996.

Accompanying me today are Mr. Bobby Byrne, Chief of Programs Management Division; and Mr. Dave Goodrich, his assistant.

AREA OF RESPONSIBILITY

The New England Division's geographic area of civil works responsibility is the six-state New England region. Thirteen million people reside in this 66,000 square mile area. We have more than 170 completed navigation projects, including 11 deep draft harbors along our 6,100 miles of coastline. The Cape Cod Canal, the world's widest sea level canal provides safe passage to more than 18,000 vessel transits each year. Also meeting the needs of the region are 134 completed flood control and storm damage prevention projects. These include 36 dams, 5 hurricane protection projects and 93 local protection projects.

OUTLINE

I would like to briefly highlight our FY 94 program execution, our efforts to support women and minority owned businesses, and the Division's budget request for Fiscal Year 1996.

PROGRAM EXECUTION

In FY 94 we executed 62% of our $3.3 million General Investigations program. In essence, the performance reflects the effort it sometimes takes to coordinate with project sponsors the scope of studies and the development of cost sharing agreements. All studies which were part of the program are completed or are now underway.

We executed 57% of our $16.8 million Construction General program. Delays on two of our larger projects impacted this program. In one case work did not progress as expected for various reasons including a strike and in the other we were forced to delay contract award in order to develop additional information supporting the preparation of plans and specifications.

We have developed an achievable FY 95 program and our budget request together with programmed carryover creates an executable program for FY 96.

WOMEN AND MINORITY CONTRACTORS AND SUBCONTRACTORS

The dollar amount of funds expended by women and minority contractors and subcontractors has continued to increase. In FY 94 the amount expended by minority contractors was $5.1 million, which was a 120 % increase from FY 93. In our current program we have new small and disadvantaged minority firms under Indefinite Delivery Type architect/engineering contracts and we are negotiating construction contracts with small and disadvantaged minority firms. A new initiative that we have underway is to use the provision for small business set-asides for environmental work. I continue to place emphasis on these programs in order to maintain the positive trend.

FISCAL YEAR 1996 PROGRAM REQUEST

The New England Division Fiscal Year 1996 budget request is $29.9 million which, together with a Fiscal Year 1995 programmed carryover of $4.2 million, amounts to a total program of $34.1 million. This represents approximately one-fourth of the Division's total projected workload.

GENERAL INVESTIGATIONS

The General Investigations program request of $550,000 is for two studies and preconstruction engineering and design for one project.

CENTRAL CONNECTICUT COASTAL AREA

We are in the process of completing the reconnaissance phase of our study to evaluate measures to reduce flooding impacts along the central Connecticut coastal area. Flooding along this reach is caused by hurricanes and coastal storms. The most recent storm, in December 1992, caused over $60 million in damages along the Connecticut coast. Fiscal Year 1996 funds will be used to continue the study.

BLACKSTONE RIVER WATERSHED RESTORATION

The Fiscal Year 1996 request includes $300,000 to initiate a reconnaissance study of measures to restore fish and wildlife habitat in the Blackstone River Watershed in Massachusetts and

Rhode Island. The environment of the Blackstone River has

suffered from years of industrial development in the basin and now represents the largest source of pollutants discharging into Narragansett Bay.

PRECONSTRUCTION ENGINEERING AND DESIGN

The request of $185,000 for preconstruction engineering and design will complete the design of the Boston Harbor, Massachusetts project.

BOSTON HARBOR, MASSACHUSETTS

This $35 million project would deepen existing channels in the Mystic River and Reserved Channel to 40 feet and in the Chelsea River to 38 feet. When completed the project will make the harbor more accessible and increase efficiency of port operations.

CONSTRUCTION, GENERAL PROGRAM

Our construction budget request of $990,000, together with a Fiscal Year 1995 programmed carryover of $4.2 million, will provide for the continuation of the Town Brook flood protection project in Quincy and Braintree, Massachusetts.

TOWN BROOK, QUINCY AND BRAINTREE, MASSACHUSETTS

We have completed our first contract, improving 1700 feet of channel and have underway a second contract for $16.9 million to construct a 4,000-foot floodwater diversion tunnel, 190 feet below the city. The boring machine, shown here, is about 600 feet into the tunnel. Funds requested in Fiscal Year 1996 together with the programmed carryover funds will allow us to complete the tunnel and initiate contract work for reconstruction of the Old Quincy Dam and Reservoir.

OPERATION AND MAINTENANCE, GENERAL

Our Operation and Maintenance budget request is $28.3 million. A total of $15.1 million requested for navigation will provide for dredging of five projects, repairs to two breakwaters, operation and maintenance of the Cape Cod Canal, and condition surveys of 38 harbors.

Our request of $13.2 million for flood control will be used for the operation and maintenance of 31 flood control reservoirs and two hurricane barriers. Additionally, 92 local protection projects throughout the New England area will be inspected.

SUMMARY

Mr. Chairman, that concludes my status report. I would be pleased to answer any questions.

[CLERK'S NOTE.—The justification sheets for the New England Division follow:]

Justification of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

NEW ENGLAND DIVISION

Corps of Engineers

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6 February 1995

Justification of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

SUMMARY, NEW ENGLAND DIVISION

	FY 1995 Allocation $	FY 1996 Request $	Increase/ Decrease $
General Investigations			
Surveys	80,000	365,000	285,000
Preconstruction Engineering and Design	36,000	185,000	149,000
Subtotal General Investigation	(116,000)	(550,000)	(434,000)
Construction, General			
Construction	8,678,500	990,000	-7,688,500
Subtotal Construction, General	(8,678,500)	(990,000)	(-7,688,500)
Operation and Maintenance, General			
Project Operations	20,278,000	21,910,000	1,632,000
Project Maintenance	12,816,000	6,454,000	-6,362,000
Subtotal Operation and Maintenance	(33,094,000)	(28,364,000)	(-4,730,000)
GRAND TOTAL, DIVISION PROGRAM	41,888,500	29,904,000	-11,984,500

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
1. SURVEYS - NEW:					
a. Navigation Studies: None.					
b. Flood Damage Prevention Studies:					
Massachusetts					
Blackstone River Watershed Restoration, MA and RI	400,000	0	0	300,000	100,000

The study area includes the entire Blackstone River Watershed which originates in Worcester, Massachusetts and flows southward to the National Estuary of Narragansett Bay in Pawtucket, Rhode Island. The watershed is approximately 540 square miles and encompasses 30 cities and towns in south-central Massachusetts and northern Rhode Island. The Corps of Engineers has constructed one flood control reservoir and four local protection projects within this relatively small watershed to alleviate flooding in urban areas and protect major utilities and roadways. These projects consist of over 9 miles of channel improvements, dikes, floodwalls, tunnels and conduits which have decreased the value and diversity of fish habitat in the project areas and have altered the natural hydrologic regime of the watershed. The Blackstone River is also the largest source of pollutants such as suspended solids, PCB's, metals and organics discharging into Narragansett Bay. One source of this pollution is the resuspension of contaminated sediments which have collected behind existing impoundments along the river. The study will evaluate possible measures to correct the numerous problems of the Blackstone River Watershed and improve its overall resource value.

Fiscal year 1996 funds will be used to initiate a reconnaissance study at full Federal expense. Studies will evaluate measures to improve fish and wildlife habitat by regulating flows; restoring fish spawning habitat, wetlands, and waterfowl nesting areas (e.g. black duck, mallards and wood ducks); constructing fish passage facilities for the target Anadromous fish species (American shad and river herring) and remediating the resuspension of contaminated sediments. These restorations are recognized as a high priority by several Federal and State agencies and would greatly improve the productivity of Narragansett Bay. Rhode Island Department of Environmental Management has already transferred juvenile Anadromous fish to the Blackstone Watershed and found good survivability. The National Park Service has designated the watershed as the Blackstone River Valley National Heritage Corridor and continues to acquire historic property throughout the basin. Both the Commonwealth of Massachusetts and State of

Study	Total Estimated Federal Cost	Allocation Prior to FY 1995	Allocation FY 1995	Tentative Allocation FY 1996	Additional to Complete After FY 1996
Blackstone River Watershed Restoration, MA and RI (cont'd)					

Rhode Island are currently cost sharing Planning Assistance studies to address specific problems and have expressed a strong interest in a basin-wide study. The Planning Assistance studies were initiated through Coastal America and received strong Congressional support at the signing ceremony. The reconnaissance report is scheduled to be completed in January 1997, which is 12 months after initiating the study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 New England Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
2. SURVEYS - CONTINUING:					
a. Navigation Studies: None.					
b. Flood Damage Prevention Studies:					
Connecticut					
Central Connecticut Coastal Flooding	920,000	276,000	80,000 1/	65,000	499,000

The study area is a 27-mile stretch of Long Island Sound coastline in Central Connecticut. This coastal reach, located about 70 miles from New York City, is situated in six communities: Branford, Guilford, Madison, Clinton, Westbrook and Old Saybrook. Flooding along this reach is caused by high tide levels which are induced by ocean storm surges and wind driven waves accompanying hurricanes and coastal storms. Severe flooding occurred during the hurricanes of September 1938, September 1944, August 1954 and September 1985. Most recently the December 1992 blizzard caused extensive damage to residential homes, commercial structures, roadways and beaches. The State of Connecticut, Department of Environmental Protection, has identified this area for detailed study to determine what measures can be undertaken to reduce tidal flood damages. The area includes over 4,000 flood prone structures and it is estimated that a repeat of the 1938 record tidal flood would cause damages in excess of $20 million. This study will concentrate on evaluating measures, such as raising structures, flood proofing and relocation, to reduce flood damages caused by tidal flooding during hurricanes and coastal storms. Meetings have been held with the State of Connecticut, Department of Environmental Protection to discuss the nature and scope of the study, and they have expressed a willingness to cost share feasibility phase studies.

Fiscal Year 1995 funds are being used to complete reconnaissance phase studies at full Federal expense and, if the reconnaissance report is certified to be in accord with policy, to continue into the feasibility phase of the study.

1/ $6,000 of the amount available for FY 1995 is scheduled as programmed carryover into FY 1996

Study	Total Estimated Federal Cost	Allocation Prior to FY 1995	Allocation FY 1995	Tentative Allocation FY 1996	Additional to Complete After FY 1996

b. Flood Damage Prevention Studies: Central Connecticut Coastal Flooding (cont'd)

The funds requested for Fiscal Year 1996 will be used to continue the feasibility study. The preliminary estimated cost of the feasibility phase is $1,140,000 which will be cost-shared on a 50-50 basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$1,490,000
Reconnaissance Phase (Federal)	350,000
Feasibility Phase (Federal)	570,000
Feasibility Phase (Non-Federal)	570,000

The reconnaissance report is scheduled to be completed in March 1995, which is 12 months after starting the study. The feasibility study will begin in August 1995 with the execution of the feasibility cost sharing agreement and is scheduled to be completed in September 1998.

c. Shoreline Protection Studies: None.

d. Special Studies: None.

e. Comprehensive Studies: None.

f. Project Review Studies: None.

3. PRECONSTRUCTION ENGINEERING AND DESIGN ACTIVITIES (PED) - NEW: NONE

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
4. PRECONSTRUCTION ENGINEERING AND DESIGN ACTIVITIES (PED) - CONTINUING:					
a. Navigation:					
Massachusetts					
Boston Harbor	2,060,000	1,839,000	36,000	185,000	0

Boston Harbor is New England's largest port and serves as the principal distribution point for the commerce of Massachusetts, New Hampshire and Vermont. The inner harbor has been extensively developed for water transportation and is comprised of the Main Ship, Reserved, Chelsea River and Mystic River Channels. In 1992, waterborne commerce totaled 19.2 million tons, of which approximately 84 percent was liquid petroleum products. A feasibility report was completed on 13 May 1988. The recommended project, estimated to cost $35,200,000 with an estimated Federal cost of $23,850,000 and an estimated non-Federal cost of $11,350,000, involves deepening the Mystic River and Reserved Channels from 35 to 40 feet and the Chelsea River Channel from 35 to 38 feet; along with deepening to 40 feet the Inner Confluence Area which provides access to the Mystic and Chelsea River Channels; deepening a portion of the 35-foot Main Ship Channel to 40 feet as it enters the Inner Confluence Area; deepening a portion of the 35-foot Main Ship Channel to 40 feet opposite the entrance of the Reserved Channel; and widening and deepening to 40 feet the Reserved Channel at its confluence with the Main Ship Channel. The proposed project would increase the navigational efficiency and safety of harbor operations and reduce tidal delays for larger vessels. The average annual benefits amount to $3,494,000, all for navigation. Benefits are from the latest detailed evaluation and are at October 1992 price levels. The benefit-cost ratio is 1.2 to 1.

The project is authorized for construction by the Water Resources Development Act of 1990. Consistent with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must 25 percent of the costs allocated to deep draft navigation during construction, currently estimated at $7,950,000, reimburse an additional 10 percent of the costs allocated to deep draft navigation within a period of 30 years following completion of construction (partially offset by a credit allowed for the value of lands, easements, rights-of-way, relocations and dredged material disposal areas), currently estimated at $2,220,000,

Study	Total Estimated Federal Cost	Allocation Prior to FY 1995	Allocation FY 1995	Tentative Allocation FY 1996	Additional to Complete After FY 1996

a. Navigation: Boston Harbor (cont'd)

relocate utilities necessary for construction of the project, currently estimated at $960,000; and deepen berthing areas at the terminals of project beneficiaries, currently estimated at $2,440,000. The Massachusetts Port Authority is the local sponsor for the project.

Funds reprogrammed to the project during Fiscal Year 1995 are being used to finalize the Environmental Impact Statement and complete the Design Memorandum. Funds requested for Fiscal Year 1996 will be used to complete plans and specifications and negotiate a Project Cooperation Agreement with the Massachusetts Port Authority. Preconstruction Engineering and Design activities are scheduled for completion in September 1996.

b. Flood Control: None.

c. Shoreline Protection: None.

d. Multiple Purpose Power: None.

APPROPRIATION TITLE: Construction, General - Local Protection Project (Flood Control)

PROJECT: Town Brook, Quincy and Braintree, Massachusetts (Continuing)

LOCATION: The project is located in the City of Quincy and the Town of Braintree on the south side of Massachusetts Bay, along the eastern shore of Massachusetts, 7 miles south of Boston in Norfolk County.

DESCRIPTION: The project involves modification of Old Quincy Dam to provide dependable flood storage capacity, construction of 4,060 feet of 12-foot diameter relief tunnel and appurtenant intake and outlet structures, and construction of 1,700 feet of channel improvements along Town River just downstream of the tunnel outlet. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1986.

REMAINING BENEFIT-REMAINING COST RATIO: The remaining benefit-remaining cost ratio is 7.4 to 1 at 8 5/8 percent.

TOTAL BENEFIT-COST RATIO: The total benefit-cost ratio is 1.3 to 1 at 8 5/8 percent.

INITIAL BENEFIT-COST RATIO: The benefit-cost ratio for the fiscal year for which Congress appropriated initial construction funds (FY 1987) was 1.11 to 1.

BASIS OF BENEFIT-COST RATIO: Benefits are from the last detailed evaluation and are at October 1989 price levels. Benefit-cost ratios are based on the project functioning independently.

SUMMARIZED FINANCIAL DATA			ACCUMALATED PCT. OF EST. FED COST
Estimated Federal Cost		$25,200,000	
Estimated Non-Federal Cost		8,400,000 1/	
Cash Contribution	$1,470,000		
Other Costs	6,930,000		
Total Estimated Project Cost		$33,600,000	

1/ Excludes $4,600,000 non-Federal cost for dam safety.

STATUS (1 Jan 1995)	PHYSICAL PERCENT COMPLETE	COMPLETION SCHEDULE
Dam/Reservoir Modification	0	Mar 1997
Channel Improvements	100	Jun 1994
Relief Conduit	30	Apr 1996
Entire Project	45	Mar 1997

PHYSICAL DATA

SUMMARIZED FINANCIAL DATA (cont'd)

Allocations to 30 September 1994	$15,299,000	
Conference Allowance for FY 1995	8,500,000	
Allocation for FY 1995	8,611,000 1/	
Allocations through FY 1995	23,910,000 2/	95
Allocation Requested for FY 1996	$ 990,000	99
Programmed Balance to Complete After FY 1996	300,000	100
Unprogrammed Balance to Complete After FY 1996	0	

Relief Conduit
  Type...............tunnel, concrete tunnel lining
  Size, inside diameter....................12 feet
  Length................................4,060 feet

Channel Improvement
  Length................................1,400 feet
  Southern Artery Culvert
    Type...Triple rectangular box, precast concrete
    Length................................300 feet
    Size (each box)............... 7 feet x 16 feet

1/ Reflects $1,345,000 restored savings and slippage and $111,000 reprogrammed to the project.

2/ Reflects $4,200,000 in programmed carryover into FY 1996.

JUSTIFICATION: Town Brook flows through the heavily developed urban area of the City of Quincy, located on Massachusetts Bay just south of Boston. Town Brook does not have the capacity to carry floodflows from the highly developed watershed. Its small channel capacity has resulted in increasingly severe and frequent flooding in the downstream residential and commercial districts of Quincy. The Brook has been almost completely modified in its lower developed reaches by a system of culverts, underground conduits, and walled channels. Hundreds of residential and commercial properties are subject to flood damage. The two most recent major floods occurred in August 1955, the greatest of record, and March 1968. The 1955 flood was nearly a 100-year event, and a recurrence of that event would cause losses in excess of $11,000,000. Recurring losses for the 100-year event would be more than $18,000,000. A recurrence of the 1968 flood, approximately a 10-year event, would cause nearly $2,000,000 in damages. The proposed project would prevent damages from all floods up to and including a flood event having an average recurrence frequency of once in 100 years, as well as significantly reducing damages from larger, more infrequent floods. The average annual benefits, all flood control, are estimated at $3,589,800 at 1 October 1989 prices.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $990,000 and $4,200,000 respectively, will be applied as follows:

FISCAL YEAR 1996: (cont'd)

Continue construction of dam modifications	$ 605,000
Complete construction of relief conduit (tunnel)	4,030,000
Planning, Engineering and Design	45,000
Construction Management	510,000
Total	$5,190,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed on the next page:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Pay all costs for approved compatible work associated with the project which will be credited toward the total non-Federal share of project costs.	$ 6,100,000	
Provide lands, easements and rights-of-way.	830,000	
Pay 5.51 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	1,470,000	$ 41,000
Total Non-Federal Costs	$ 8,400,000 1/	$ 41,000

The non-Federal sponsor has agreed to make all required payments concurrently with project construction.

1/ Excludes $4,600,000 non-Federal cost for dam safety.

STATUS OF LOCAL COOPERATION: The Metropolitan District Commission (MDC), an agency of the Commonwealth of Massachusetts, is the local sponsor for the project. The LCA was executed on 7 July 1992. The current non-Federal cost estimate of $8,400,000, which includes a cash contribution of $1,470,000, is a decrease of $1,580,000 from the non-Federal cash estimate of $3,050,000 noted in the LCA. The MDC has contributed their total share of project costs. The MDC, by letter dated March 10, 1987, made application to ASA(CW) for credit of $7,400,000 in compatible work done by them, in accordance with Sections 104 and 401 of the Water Resources Development Act of 1986. The ASA(CW) approved on 20 May 1988 a credit of $6,100,000 for their work. The MDC has obtained all state and local permits necessary for project construction.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $25,200,000 is a decrease of $2,325,000 from the latest estimate ($27,525,000) submitted to Congress (FY 1995). This change includes the following items:

Item	Amount
Price escalation on construction features	$ 225,000
Post award and other estimating adjustments	-2,550,000
Total	$-2,325,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Assessment and Finding of No Significant Impact was completed on 29 September 1980.

OTHER INFORMATION: Funds to initiate Preconstruction Engineering and Design (PED) were appropriated in FY 1983 and funds to initiate construction were appropriated in FY 1987. A contract for construction of channel improvements along Town River was awarded 30 September 1992. A second contract for construction of the relief tunnel was awarded 15 September 1993. Programmed work is scheduled to be completed in March 1997.

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. Navigation

a. Channels and Harbors.

The program request of $11,441,000 provides for essential operation and maintenance work on the Cape Cod Canal and for essential maintenance work on seven harbor and channel projects named in the list which follows.

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	ESTIMATED OBLIGATIONS FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
CONNECTICUT			
Stony Creek	412,000	412,000	
	(0)	(0)	1. None.
	(412,000)	(412,000)	2. None.
MAINE			
Criehaven Harbor	293,000	293,000	
	(0)	(0)	1. None.
	(293,000)	(293,000)	2. None.
MASSACHUSETTS			
Cape Cod Canal	6,157,000	8,087,000	
	(5,081,000)	(5,243,000)	1. None.
	(1,076,000)	(2,844,000)	2. Upgrade computer/radar interface for vessel tracking system.

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. Navigation (Cont'd)

a. Channels and Harbors. (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	ESTIMATED OBLIGATIONS FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
MASSACHUSETTS (Cont'd)			
Green Harbor	366,000 (0) (366,000)	364,000 (0) (364,000)	1. None. 2. None.
Newburyport Harbor	0 (0) (0)	646,000 (0) (646,000)	1. None. 2. Maintenance dredging.
Scituate Harbor	0 (0) (0)	208,000 (0) (208,000)	1. None. 2. None.
Sesuit Harbor	0 (0) (0)	217,000 (0) (217,000)	1. None. 2. None.
Wellfleet Harbor	1,254,000 (0) (1,254,000)	1,214,000 (0) (1,214,000)	1. None. 2. Maintenance dredging.

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. Navigation (Cont'd)

a. Channels and Harbors. (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	ESTIMATED OBLIGATIONS FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
Other Projects Maintained Periodically	1,626,000 (0) (1,626,000)	0 (0) (0)	
Total - Channels and Harbors	10,108,000 (5,081,000) (5,027,000)	11,441,000 (5,243,000) (6,198,000)	
b. Locks, Dams & Canals.	None		
TOTAL - NAVIGATION	10,108,000 (5,081,000) (5,027,000)	11,441,000 (5,243,000) (6,198,000)	

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. Flood Control
   a. Reservoirs.

The program request of $12,543,000 provides for the operation and maintenance requirements of 31 flood control reservoirs. Requirements include: operation and ordinary maintenance of project facilities; labor, supplies, materials and parts required for day-to-day functioning; periodic maintenance, repairs and replacements; and contract law enforcement. The requested amount also includes application of Special Recreation Use Fees for recreation areas.

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	ESTIMATED OBLIGATIONS FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
CONNECTICUT			
Black Rock Lake	319,000	249,000	
	(219,000)	(249,000)	1. Remove debris, radio maintenance.
	(100,000)	(0)	2. None.
Colebrook River Lake	330,000	375,000	
	(284,000)	(334,000)	1. Remove debris, radio maintenance.
	(46,000)	(41,000)	2. None.
Hancock Brook Lake	216,000	264,000	
	(201,000)	(264,000)	1. Perform condition studies.
	(15,000)	(0)	2. None.
Hop Brook Lake	835,000	724,000	
	(625,000)	(724,000)	1. Remove debris, contract for fee collection.
	(210,000)	(0)	2. None.

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. a. Flood Control, Reservoirs(Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	ESTIMATED OBLIGATIONS FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
CONNECTICUT (Cont'd)			
Mansfield Hollow Lake	431,000 (366,000) (65,000)	349,000 (349,000) (0)	1. None. 2. None.
Northfield Brook Lake	293,000 (242,000) (51,000)	325,000 (325,000) (0)	1. Perform condition studies. 2. None.
Thomaston Dam	607,000 (350,000) (257,000)	471,000 (467,000) (4,000)	1. Perform condition studies. 2. None.
West Thompson Lake	479,000 (388,000) (91,000)	486,000 (486,000) (0)	1. Perform condition studies. 2. None.
MASSACHUSETTS			
Barre Falls Dam	668,000 (398,000) (270,000)	342,000 (331,000) (11,000)	1. Decrease in condition studies. 2. None.

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. Flood Control (Cont'd)

a. Reservoirs. (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	ESTIMATED OBLIGATIONS FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
MASSACHUSETTS (Cont'd)			
Birch Hill Dam	516,000	336,000	
	(370,000)	(326,000)	1. Decrease in condition studies.
	(146,000)	(10,000)	2. None.
Buffumville Lake	400,000	331,000	
	(355,000)	(331,000)	1. None.
	(45,000)	(0)	2. None.
Charles River Natural Valley Storage Area	172,000	153,000	
	(172,000)	(153,000)	1. None.
	(0)	(0)	2. None.
Conant Brook Lake	369,000	236,000	
	(148,000)	(236,000)	1. Perform condition studies.
	(221,000)	(0)	2. None.
East Brimfield Lake	504,000	385,000	
	(303,000)	(385,000)	1. Perform environmental studies.
	(201,000)	(0)	2. None.

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. Flood Control (Cont'd)

a. Reservoirs. (Cont'd)

	ESTIMATED OBLIGATIONS		Reason for Change and Major Maintenance Items
STATE Project Name	FY 1995 ($) Total (Operations) (Maintenance)	FY 1996 ($) Total (Operations) (Maintenance)	1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
MASSACHUSETTS (Cont'd)			
Hodges Village Dam	981,000	339,000	
	(434,000)	(339,000)	1. Decrease in condition studies.
	(547,000)	(0)	2. None.
Knightville Dam	558,000	355,000	
	(361,000)	(345,000)	1. None.
	(197,000)	(10,000)	2. None.
Littleville Lake	398,000	326,000	
	(313,000)	(314,000)	1. None.
	(85,000)	(12,000)	2. None.
Tully Lake	520,000	384,000	
	(350,000)	(369,000)	1. None.
	(170,000)	(15,000)	2. None.
West Hill Dam	471,000	479,000	
	(437,000)	(479,000)	1. None.
	(34,000)	(0)	2. None.

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. a. Flood Control, Reservoirs (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
MASSACHUSETTS (Cont'd)			
Westville Lake	500,000	369,000	
	(379,000)	(369,000)	1. None.
	(121,000)	(0)	2. None.
NEW HAMPSHIRE			
Blackwater Dam	445,000	387,000	
	(273,000)	(366,000)	1. Perform environmental studies.
	(172,000)	(21,000)	2. None.
Edward MacDowell Lake	330,000	346,000	
	(318,000)	(322,000)	1. None.
	(12,000)	(24,000)	2. None.
Franklin Falls Dam	613,000	614,000	
	(403,000)	(582,000)	1. Perform environmental studies, master plan.
	(210,000)	(32,000)	2. None.
Hopkinton-Everett Lakes	1,459,000	827,000	
	(782,000)	(756,000)	1. None.
	(677,000)	(71,000)	2. None.

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. Flood Control, Reservoirs (Cont'd)

	ESTIMATED OBLIGATIONS		Reason for Change and Major Maintenance Items
STATE Project Name	FY 1995 ($) Total (Operations) (Maintenance)	FY 1996 ($) Total (Operations) (Maintenance)	1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
NEW HAMPSHIRE (Cont'd)			
Otter Brook Lake	597,000	392,000	
	(354,000)	(392,000)	1. Perform environmental studies.
	(243,000)	(0)	2. None.
Surry Mountain Lake	563,000	401,000	
	(353,000)	(401,000)	1. Perform environmental studies.
	(210,000)	(0)	2. None.
VERMONT			
Ball Mountain Lake	979,000	548,000	
	(479,000)	(548,000)	1. Perform environmental studies.
	(500,000)	(0)	2. None.
North Hartland Lake	427,000	398,000	
	(353,000)	(398,000)	1. Dam safety training, radio maintenance.
	(74,000)	(0)	2. None.
North Springfield Lake	478,000	483,000	
	(426,000)	(483,000)	1. Dam safety training, remove debris.
	(52,000)	(0)	2. None.

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. Flood Control (Cont'd)

a. Reservoirs. (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	ESTIMATED OBLIGATIONS FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
VERMONT (Cont'd)			
Townshend Lake	1,821,000	506,000	
	(428,000)	(506,000)	1. Perform environmental studies.
	(1,393,000)	(0)	2. None.
Union Village Dam	522,000	363,000	
	(331,000)	(363,000)	1. None.
	(191,000)	(0)	2. None.
Total - Reservoirs	17,801,000	12,543,000	
	(11,195,000)	(12,292,000)	
	(6,606,000)	(251,000)	

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. Flood Control (Cont'd)

b. Channel Improvements, Inspections and Miscellaneous Maintenance.

The program request of $702,000 provides for the operation and maintenance requirements of 2 hurricane flood protection projects, the International St. Croix River Board of Control and the inspection of completed projects, turned over to locals.

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
CONNECTICUT			
Stamford Hurricane Barrier	1,300,000	245,000	
	(197,000)	(240,000)	1. Perform biannual navigation system inspection.
	(1,103,000)	(5,000)	2. None.
MASSACHUSETTS			
New Bedford, Fairhaven & Acushnet Hurricane Barrier	278,000	241,000	
	(198,000)	(241,000)	1. Perform condition studies.
	(80,000)	(0)	2. None.
Inspection of Completed Works	212,000	200,000	
	(212,000)	(200,000)	1. None.
	(0)	(0)	2. None.

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. Flood Control (Cont'd)

b. Channel Improvements, Inspections and Miscellaneous Maintenance. (Cont'd)

	ESTIMATED OBLIGATIONS		Reason for Change and Major Maintenance Items
STATE Project Name	FY 1995 ($) Total (Operations) (Maintenance)	FY 1996 ($) Total (Operations) (Maintenance)	1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
International St. Croix River Board	16,000	16,000	
	(16,000)	(16,000)	1. None.
	(0)	(0)	2. None.
Total - Channel Improvements Inspections and Miscellaneous Maintenance	1,806,000	702,000	
	(623,000)	(697,000)	
	(1,183,000)	(5,000)	
TOTAL - FLOOD CONTROL	19,607,000	13,245,000	
	(11,818,000)	(12,989,000)	
	(7,789,000)	(256,000)	

3. Multiple Purpose Power Projects None.

NEW ENGLAND DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

4. Protection of Navigation

The program request of $3,678,000 provides for project condition surveys on some projects for which maintenance is not scheduled in the budget year and for disposal area monitoring.

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	ESTIMATED OBLIGATIONS FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reasons for Changes in Operations from FY 95 to FY 96 (10%+/-). 2. Major Maintenance Items Budgeted in FY 96 (Threshold $500,000).
Condition Surveys	3,379,000 (3,379,000) (0)	3,678,000 (3,678,000) (0)	1. Increase in number of condition surveys. 2. None.
TOTAL - PROTECTION OF NAVIGATION	3,379,000 (3,379,000) (0)	3,678,000 (3,678,000) (0)	
GRAND TOTAL - NEW ENGLAND DIVISION	33,094,000 (20,278,000) (12,816,000)	28,364,000 (21,910,000) (6,454,000)	

IMPACT ON NEW POLICY

Mr. MYERS. Thank you, Colonel Richardson.

The question we are asking everyone is about the impact of the new criteria proposed by the administration on what projects should be permitted to continue. What impact has it had on your Division?

Colonel RICHARDSON. Sir, there are four projects that were in the General Investigation budget from the Division to the Headquarters, that were not included in the budget. There was one new start Construction General project that was not included.

The total value of the General Investigations was about $850,000, and the value of the new start construction project was $710,000, for a total of about $1.6 million.

LOCAL PROJECTS

Mr. MYERS. I mentioned the problems you have. As I recall, it seems like the environmental issues we experience so frequently started in New England. We have labored on that for years here. A lot of the problems, I recall, have been small projects, locally built dams, some of them for mill work, some for power, and then some of these provide flood control also.

You showed one picture here. Do you still have a problem with reworking some of these, examining dams and eliminating some of these problems that have been associated with very small streams?

Colonel RICHARDSON. Yes, sir. Principally that is the case.

Mr. MYERS. You are continuing that?

What responsibility under this new criteria will you have in these kinds of local projects that were built years ago with private resources?

Colonel RICHARDSON. Sir, we still have some ability to work under the Section 1135 authority that we have which is essentially for addressing environmental considerations that are caused by the impact of projects that we have built and operate. We have other environmental work.

The Blackstone project that I talked about, which is a recon-level study looking at the entire Blackstone River basin and the environmental impact on that basin of the years of industrial use plus some local protection projects, and one facility that the Corps has built.

DIVISION WORKLOAD

Mr. MYERS. I am not about to suggest that you need to eliminate your Division. But the workload is going down considerably in your Division. I think you have one project in preconstruction and one in construction, and the prospects of studies is down, isn't it?

Colonel RICHARDSON. Yes, sir.

Mr. MYERS. How many people do you still have working in the Division?

Colonel RICHARDSON. Sir, we have about 600 people who work on a permanent basis. Seasonal fluctuations will take us up over 700 with summer hires for staff on our projects.

Mr. MYERS. When you complete the construction underway now, what is going to be left under the new criteria.

Colonel RICHARDSON. The total workload of the New England Division is only about a third in the civil works area. We do a tremendous amount of work for others. We have a superfund program that will be in the vicinity of $60 to $70 million on a continuing basis.

We have the BRAC closure that we are doing for the Army Materials Testing Laboratory in Watertown and for Fort Devens that takes considerable resources. We have over 600 areas where we have either identified or are continuing to identify work that is necessary in the defense environmental restoration program for formerly used sites and installation restoration.

Mr. MYERS. A lot of your work is military rather than civil?

Colonel RICHARDSON. Yes, sir.

Mr. MYERS. Do you work for the States and local communities, too?

Colonel RICHARDSON. Yes, sir. We have done some work under Planning Assistance to States, we have a considerable amount of work going in that area.

Mr. MYERS. Would you provide for the record briefly more information about what you have told us in this area, the kinds of projects you are doing for the military?

This committee won't decide on a reorganization, but as you know there has been consideration for some time about reorganizing the Corps. I know New England was one of the ones discussed at one time.

Colonel RICHARDSON. Yes sir.

[The information follows:]

New England Division Workload for FY 95

Civil works:	
General investigations	$3,000
Construction, general	15,000
Operations and maintenance	34,000
Flood control coastal emergencies	280
Regulatory	4,700
General expense	850
Contributed funds	1,170
Subtotal	59,000
Support for others:	
Environmental Protection Agency	60,000
Internal Revenue Service	2,500
Federal Emergency Management Agency	400
Federal Aviation Agency	3,000
Housing and Urban Development	100
Subtotal	66,000
Military support:	
Defense environmental restoration program	18,200
Base realignment and closure	8,600
Coast Guard	200
Subtotal	27,000
Total program	152,000

Mr. MYERS. Mr. Longley from Maine has a series of questions that he has provided for the record.

[The information follows:]

QUESTIONS FOR THE RECORD FROM MR. LONGLEY

PERMIT FOR SEARS ISLAND CARGO TERMINAL, MAINE

Question. The State of Maine has been attempting to permit a cargo port on Sears Island, Maine for approximately 18 years, yet issues continually raised by federal agencies have been a major reason why a decision on this project has been delayed again and again. What assurances can we, as a subcommittee, get from you that the process will be brought to closure this year and that a decision will be made on permitting this project? What specific steps do you plan to bring this process to closure this year?

Answer. I can not provide you assurances that the process will be brought to closure this year. The Federal Highway Administration is the lead Federal agency preparing a supplemental EIS. A draft is expected to be released in April. At this point we do not have an application to act upon. The earliest a Corps permit can be issued is 30 days after the Supplemental EIS is filed. We will continue to work closely with the Federal Highway Administration, the Environmental Protection Agency and the Maine Department of Transportation to reach a solution on this project.

MACK POINT, MAINE

Question. Again, regarding; the proposed Sears Island cargo port in Maine, for the past twelve years there have been numerous studies regarding the feasibility of locating a cargoport at Mack Point, which is located directly across from Sears Island. These studies indicate that Mack Point, for several reasons, is not a practical location for the facility. Why is Mack Point still under consideration? How many studies are needed?

Answer. The Environmental Protection Agency has continued to raise the Mack Point site with the applicant, the Maine Department of Transportation. The Corps has not asked for any additional studies.

POLICY ON ANALYSIS OF PUBLIC TRANSPORTATION PROJECTS

Question. I understand that the Corps has a policy regarding the analysis which is required before permitting public transportation projects, and I wanted to verify it with you for the record. It is my understanding that when impacts of a general transportation project are analyzed for a permit under NEPA or the Clean Water Act, the Corps does not require or consider the impact of manufacturing the product(s) which are transported through or over the project. It only considers the impact of the project itself. Is that your region's policy?

Answer. Yes that is correct. The Corps has no separate policy regarding the consideration of impacts caused by the manufacturing of products transported through or over the project. Direct and indirect effects of projects are evaluated on a case specific basis. In this particular case we have acknowledged the way FHWA has addressed the forest impact in their EIS under preparation and have found that sufficient for us.

PERMIT PROCESS

Question. How many projects do you have in the New England division which are stalled like the Sears Island cargoport? Why is this happening? What can you do to make this process work more quickly and smoothly?

Answer. We have four additional projects in that category. They are the Nashua Circumferencial Highway and the Conway Bypass in New Hampshire, Route 6 in Connecticut and the Bennington Bypass in Vermont. The reason these controversial projects are taking longer is because EPA, in its' proper role, is taking care to ensure that the selected plans are least damaging to the environment. We continually attempt to coordinate with the applicant, EPA and any other appropriate agencies to resolve concerns and develop an environmentally acceptable and permittable project.

COST OF MITIGATION

Question. How does the cost of mitigation (compiling plans and implementation) in the New England District compare with districts in other parts of the country? Higher? Lower? Have there been projects which have not gone forward because an agreement on mitigation could not be reached?

Answer. Figures on the comparative cost of mitigation are not available. Only 2 to 3 percent of the 6,000 applicants we review annually require any form of mitigation and often that is minor in nature. The EPA, however, occasionally separately negotiates with the applicant for voluntary additional mitigation. For example, the voluntary eel grass mitigation for the State port expansion project in Portsmouth, New Hampshire is running over $350,000 an acre when the Corps did not require mitigation for the less than one acre loss.

NEW POLICY

Mr. MYERS. Mr. Bevill.

Mr. BEVILL. Thank you, Mr. Chairman.

Colonel, you mentioned those four projects. Would you name those projects?

I would like to learn a little more about that because I want to get familiar with the impact of this policy. I am a little shocked at this proposal. And those projects that would be left out now because of the new rule, would you name one of them?

Colonel RICHARDSON. Yes, sir. I can name all four.

Mr. BEVILL. Well, I want you to name all four, but I want you to start with one.

HUMAROCK BEACH

Colonel RICHARDSON. Humarock Beach is a feasibility study.

Mr. BEVILL. The beaches are out. We know what the impact will be there. What is the next?

EAST CENTRAL CONNECTICUT AND COASTAL RHODE ISLAND

Colonel RICHARDSON. There are two others that are very much similar. If you will allow me, I will address them both at the same time. One is the East Central Connecticut and the other is Coastal Rhode Island. They are two separate projects but in a sense they are recon studies where we intend to go in and look in a geographic area at what shoreline protection measures can be implemented that have Federal benefit. Both of these studies fell under the new policy and were eliminated from the budget request.

Mr. BEVILL. What will happen? Do you have any recommendations? I am curious to know what is going to happen to these projects, that the local governments won't be in a position to handle.

Colonel RICHARDSON. Sir, both of these projects would go into the recon phase. So we haven't done any assessments whatever as to what target opportunities there may be. So at this point——

Mr. BEVILL. Do you have any judgement as to the cost yet?

Colonel RICHARDSON. No, sir.

Mr. BEVILL. You haven't gotten that far.

Colonel RICHARDSON. That is correct.

ROUGHANS POINT

Mr. BEVILL. What is going to happen to the construction project?

Colonel RICHARDSON. The one construction project is at Roughans Point. It is shoreline armoring of about 3,000 feet in a community north of Boston. That project will not go forward into the construction phase given the way the budget has been built.

Mr. BEVILL. You have done all the preliminary work, done all that, but you haven't actually started construction?

Colonel RICHARDSON. Yes, sir, that is correct. That is about 65 percent complete with design.

Mr. BEVILL. And so that project is left out.

Colonel RICHARDSON. Yes, sir.

Mr. BEVILL. Can you give us a little more information on what the impact will be on that? It is 65 percent complete?

Colonel RICHARDSON. The plans and specifications, yes, sir. That would have been a new start in the 1996 budget.

Mr. BEVILL. Do you know how much was spent on that preparing that 65 percent? If you don't have it you can put it in the record.

Colonel RICHARDSON. Okay, sir, I will submit that.

[The information follows:]

Funds of $1,044,000 have been spent to date on design of the Roughans Point, Massachusetts project.

Mr. BEVILL. But whatever amount of money was spent on that is just going to be wasted if the local government can't handle it; isn't that right? There is nothing to be done?

Colonel RICHARDSON. Well, sir, that is right.

OMPOMPANOOSUC RIVER

Mr. BEVILL. Now, you mentioned three, did you name the fourth project?

Colonel RICHARDSON. No, sir. The other one is the Ompompanoosuc River and includes a flood control facility that has been built in the State of Vermont. There are some environmental aspects with regard to two old copper mines that preexisted the placement of the facility. They are having some effect on the project. Under this study we will go in to determine whether there is some way we can alleviate the impact of those two mines on the project waters.

Mr. BEVILL. But now under the new regulations that is stopped?

Colonel RICHARDSON. Yes, sir. That is correct.

Mr. BEVILL. What will be the outcome of that?

Colonel RICHARDSON. Sir, it won't go forward. It is not in the budget.

Mr. BEVILL. And if the local government can't handle it and can't get the money and can't finance it?

Colonel RICHARDSON. Sir, this would be a recon-level. It would be 100 percent Federal funded.

Mr. BEVILL. It will be?

Colonel RICHARDSON. It would be 100 percent Federal funded.

Mr. BEVILL. Would it be under the new rules? So there is no real problem there.

Colonel RICHARDSON. Not with having to have a local sponsor.

Mr. BEVILL. I thought I heard you to say fully federally funded. I am just not following you, I don't believe. Will it be federally funded or not?

Colonel RICHARDSON. Yes, sir, it will be federally funded.

Mr. BEVILL. What is the problem?

Colonel RICHARDSON. The problem is that it is considered to fall under the new policy, that it is not going to be supported in the budget.

Mr. BEVILL. But if it isn't supported in the budget and it falls under the new policy, that is the end of it, isn't it?

Colonel RICHARDSON. Yes, sir.

Mr. BEVILL. All right. Now we are communicating.

Colonel RICHARDSON. Okay.

Mr. BEVILL. Maybe my questions just weren't very good.

Well, Mr. Chairman, I believe that is all I have.

Mr. MYERS. Thank you.

I have questions I will provide for the record.

Thank you very much for your presentation this morning. Good luck to you.

[The information follows:]

BLACKSTONE RIVER WATERSHED STUDY

Mr. MYERS. You indicate that both the Commonwealth of Massachusetts and the State of Rhode Island have a strong interest in the Blackstone River Watershed study. Why is it necessary for the Federal Government to be involved in the study?

Colonel RICHARDSON. The Commonwealth of Massachusetts and the State of Rhode Island have a strong interest in restoring the environmental and recreational value of the Blackstone River. Their goals include re-establishment of a healthy and diverse aquatic environment, restoration of anadromous fish, improvement of waterfowl habitat and increased recreational opportunities in and along the river. Recognizing our expertise in water resource planning, both states entered into a cost-shared study with us under Section 22 of the Planning Assistance to the States program to address specific problems and develop the framework for a more comprehensive study of the watershed. Our involvement in the comprehensive study is necessary to ensure that individual measures for environmental restoration are evaluated and integrated in a plan covering the entire Blackstone River watershed.

BROCKTON AND MUDDY RIVER, MASSACHUSETTS STUDIES

Mr. MYERS. What is the status of the Brockton, Massachusetts water supply study and the Muddy River, Massachusetts study?

Colonel RICHARDSON. Our reconnaissance report for the Brockton, Massachusetts water supply study will be completed in June 1995. A Taunton River diversion, desalinization and connection to the Massachusetts Water Resources Authority system are among the measures being considered for Brockton, which has been experiencing a water supply shortage since 1986. Both regional and local water supply alternatives are being assessed for an additional 10 communities within the Taunton River Basin, projected to have a water shortage by the year 2010. The study is also addressing existing and potential water conservation techniques.

Feasibility study of the Muddy River was initiated in December 1994. This effort is being cost shared equally with the Commonwealth of Massachusetts Department of Environmental Management. We are examining various measures to restore the environmental quality of the Muddy River including removal of illegal sewer overflows, pretreating storm water runoff, flow augmentation and dredging of contaminated sediments. The study is scheduled to be completed in June 1996.

CONTINUING AUTHORITIES PROGRAM

Mr.MYERS. What work do you have underway in fiscal year 1995 and planned for fiscal year 1996 under the various continuing authorities programs?

Colonel RICHARDSON. We remain very active in the Continuing Authorities Program providing solutions to the water resource needs of our region. We have a total of 32 active studies and projects within the program. This includes 10 construction contracts, 8 design efforts and 14 studies. During the balance of this fiscal year, we plan to complete 1 cost-shared feasibility study, all 8 design efforts and construction of 7 projects. We also anticipate award of 3 additional construction contracts and initiation of 1 design effort and 2 cost-shared studies. Our program for fiscal year 1996 is expected to be about the same size. We will complete 3 cost-shared feasibility studies, 2 design efforts and construction of 6 ongoing projects. We anticipate award of an additional 6 construction contracts and initiation of 2 design efforts and 1 cost-shared feasibility study as well as new reconnaissance efforts in response to local requests.

ENVIRONMENTAL STUDIES AT FLOOD CONTROL RESERVOIRS

Mr. MYERS. There are a number of flood control reservoirs for which you indicate you will be performing environmental studies. Please explain what those studies are and why they are needed.

Colonel RICHARDSON. The environmental studies at our flood control reservoirs include cultural resource inventories, endangered species surveys, wetlands delineations and environmental assessment updates. The need for these studies was identified when we conducted our ERGO assessments. ERGO stands for environmental review guide for operations. It is a manual used by managers to help achieve, maintain and monitor compliance with Federal, state and local environmental laws and regulations in the operation of their facilities. The studies we are conducting will assist in identifying cultural, historical and natural resources at our projects and then ensure that subsequent operations do not harm these resources.

CONDITION STUDIES

Mr. MYERS. What are "condition studies"?

Colonel RICHARDSON. Condition studies are inspections of our dams and appurtenances which are conducted on five year intervals. A team of geologists and engineers representing all required disciplines perform a comprehensive on site inspection of all project features. A report is prepared detailing the results of the inspection and identifying any deficiencies that may need remedial measures to insure the continued functional and structural integrity of the project.

DAM SAFETY TRAINING

Mr. MYERS. Please explain the dam safety training that will be undertaken at the North Hartland Lake and North Springfield Lake projects in Vermont.

Colonel RICHARDSON. Dam safety training is provided every four years to our on site personnel who operate the dam facilities. The training is led by members of our geotechnical engineering staff and consists of background information on design and construction of the dam as it relates to dam safety, instruction on recognizing early signs of dam distress, for instance seepage or boils and methods for the timely monitoring and reporting of any such signs. The training also includes practical hands-on exercises such as ringing a boil and reading piezometer. As a point of interest, we also invite state dam safety personnel to these sessions and have had good participation.

REPAIRS TO THE CAPE COD CANAL, MASSACHUSETTS RAILROAD BRIDGE

Mr. MYERS. Please provide the Committee with a status report on repairs to the Cape Cod Canal, Massachusetts railroad bridge.

Colonel RICHARDSON. While the actual repair work has still not begun, we finally have a positive development that will allow us to get this needed work underway. Bay Colony Railroad operates the railroad under contract with the Massachusetts Executive Office of Transportation and Construction. Under an existing agreement, Bay Colony has the right to perform the repair work with Federal reimbursement. However, they have been unable to undertake this significant repair. The Massachusetts Executive Office of Transportation and Construction, with concurrence from Bay Colony, now agrees that it is best for the Corps to do the work directly.

A 90 day contract for steel inspection is scheduled for award in April. Plans and specifications for steel repairs and painting, repairs to the elevator system and needed electrical work will be completed this summer. We expect the contract to be awarded this fall. A follow-on larger contract will provide for cable and bearing replacements. We still have to work out agreement on shut down time for the bridge during this phase of the work.

THURSDAY, FEBRUARY 23, 1995.

PACIFIC OCEAN DIVISION

WITNESSES

BRIGADIER GENERAL HENRY S. MILLER, JR., COMMANDER AND DIVISION ENGINEER

KISUK CHEUNG, DIRECTOR OF PROGRAMS AND PROJECT MANAGEMENT

DAVID A. LAU, ACTING CHIEF, CIVIL PROGRAMS BRANCH

OPENING REMARKS

Mr. MYERS. General Miller, the committee is pleased to have you. You have been sitting here all these days. Finally you get on the firing line. We are pleased to have you here. Who is the fellow on your right?

General MILLER. Mr. Cheung, I think you have probably seen him many times.

Mr. MYERS. He has been here as many times as Tom and I. Your entire statement will be placed in the record. You may proceed as you wish.

STATUS REPORT

General MILLER. Thank you, Mr. Chairman.

Mr. Chairman, Members of the committee, I am Brigadier General Hank Miller, Commander of the Pacific Ocean Division. I am pleased to appear before you to report today. I am accompanied by Mr. Charlie Cheung, Director of Programs and Project Management, and Mr. David Lau, Acting Chief, Civil Programs Branch.

AREA OF RESPONSIBILITY

Our area of operation for Civil Works covers over 6 million square miles of the Pacific Ocean and includes the State of Hawaii, the Commonwealth of the Northern Mariana Islands, and the territories of American Samoa and Guam. Although not related to our Civil Works programs, the Pacific Ocean Division has also a $1.2 billion military construction mission that encompasses the State of Hawaii, Kwajalein Atoll, Japan, and the Republic of Korea.

The islands within the Division's area of responsibility offer a diversity of natural beauty, cultures, environments and economies. The islands also present many challenges that are unlike those that many of us have experienced or are accustomed to in our daily life. They include distance and travel, remoteness, and limited resources where land and the environment are exceptionally precious commodities.

The Pacific Ocean Division has a long and proud history of planning, designing and constructing vital water resource projects that provide the vital lifeline in many of the insular areas. These projects reduce the threat of flooding, improve navigation conditions, and deter coastal erosion and inundation.

Perhaps more importantly, our projects help contribute to improving the quality of life and economic well-being of the people that we serve in the Pacific.

Although our islands are beautiful, they are also vulnerable to nature's fury. Time and distance magnify the devastation caused by natural disasters, large and small, and have long-lasting environmental, social and economic consequences. We are proud of our emergency response teams' ability to deploy on a moment's notice, to provide immediate assistance when these natural disasters strike.

People, islands, and water are the focus of our regional visitor's center and our Civil Works program in the Pacific. With these words in mind, I invite you to view the unique water resources challenges of island life and environment from the perspective of a Pacific island inhabitant. I will now highlight our fiscal years 1994 and 1995 activities and present our budget request for fiscal year 1996.

FISCAL YEARS 1994 AND 1995 ACTIVITIES

The Pacific Ocean Division's activities for fiscal years 1994 and 1995 include the following.

WAILUPE STREAM FLOOD CONTROL

For the Wailupe Stream Flood Control Study on Oahu, the negotiated feasibility study cost sharing agreement was executed in February 1994. We are continuing feasibility phase investigations in fiscal year 1995.

BARBERS POINT HARBOR

We completed Barbers Point Deep Draft Harbor on Oahu in 1985. At the request of the State of Hawaii, reconnaissance studies were initiated in fiscal year 1994 for channel and basin modifications. This request is based on the need to accommodate larger-sized vessels and the expanding use of the harbor. Reconnaissance phase studies are scheduled for completion in fiscal year 1995.

KIKIAOLA SMALL BOAT HARBOR

For Kikiaola Small Boat Harbor on Kauai, preconstruction engineering and design activities were initiated in fiscal year 1994 for modification of this existing facility. The modifications will attenuate adverse wave conditions and allow full use of this harbor.

KAUMALAPAU HARBOR

Kaumalapau Harbor is the island of Lanai's only commercial harbor. As directed in both the fiscal years 1993 and 1994 Energy and Water Development Appropriations Acts, preconstruction engineering and design activities are continuing in 1995. Activities include the preparation of a design report, environmental studies, and hydraulic model investigations.

ALENAIO STREAM FLOOD CONTROL

For the $15 million Alenaio Stream Flood Control project on Hawaii, a construction contract was awarded in November 1994. The project will prevent flood damages to Hilo, the urban center and county seat of the island of Hawaii.

KAWAIHAE SMALL BOAT HARBOR

For the Kawaihae Small Boat Harbor project on the Big Island of Hawaii, the improved breakwater and harbor facility will allow for safer operation and increased berthing capacity for commercial navigation. A revised General Reevaluation Report was completed in October 1994. The construction award of the project has been held in abeyance pending resolution of economic concerns regarding the commercial and/or recreational use of the harbor.

In addition, the State of Hawaii is currently reviewing their financial capability to cost share in regard to the State's $250 million projected deficit. As a result, the project has not been included in our fiscal year 1996 budget request.

MAALAEA SMALL BOAT HARBOR

The Maalaea Small Boat Harbor project on Maui is the State of Hawaii's Department of Land and Natural Resources' highest priority harbor project. The project will modify the existing harbor breakwater to eliminate adverse navigation conditions and increase the berthing capacity for commercial craft.

We completed a supplemental Environmental Impact Statement in fiscal year 1994. Construction award of the project is projected for the fourth quarter of fiscal year 1995 pending resolution of the commercial and/or recreational use of this harbor and the numerous public comments and concerns regarding water quality, endangered species and surfing issues.

Additionally, the State of Hawaii's recently projected budget shortfall may also have an impact on the start of this project.

KAWAINUI MARSH FLOOD CONTROL

For the Kawainui Marsh Flood Control project on Oahu, a $4.6 million construction contract was awarded in September of 1994. This continuing authorities project will provide protection to approximately 2,000 residential, public and commercial structures adjacent to the largest wetland in the State of Hawaii.

PORT ALLEN BREAKWATER REPAIR

For the Port Allen Breakwater repair project on Kauai, construction was completed in August 1994 to repair damages caused by Hurricane Iniki.

OFU HARBOR REPAIR

For Ofu Harbor in American Samoa, construction of hurricane damage repairs was completed in December 1994.

SMALL AND DISADVANTAGED BUSINESSES

I would now like to report on the Pacific Ocean Division's small and disadvantaged business program, which we actively participate in and support. Our prime contract awards show that small businesses, including small disadvantaged businesses and women-owned small businesses received approximately 23 percent of all contract dollars awarded in fiscal year 1994. Small disadvantaged businesses received 16 percent, 8(a) firms were award 2 percent, and women-owned small businesses were provided with 1 percent of all prime contract awards.

FISCAL YEAR 1996 BUDGET REQUEST

The Pacific Ocean Division's budget request for fiscal year 1996 totals $2,328,000. Our request includes $700,000 for the General Investigations and $1,628,000 for Operation and Maintenance. No, fiscal year 1996 Construction, General funding is being requested as unobligated program carryover will be used to fully fund our fiscal year 1996 requirements.

We recognize that in our enthusiasm and eagerness to respond to our local sponsor's needs, we have in the past submitted budgets based on schedules that, upon hindsight, were overly optimistic. As a result, we received more than we could expend and have built up a reserve that will not be fully expended for at least two years.

In fiscal year 1994, we expended 65 percent of the funds available and we have identified a total of $6,228,000 as programmed carryover from fiscal year 1995 into fiscal year 1996.

In order to fully use the funds that have already been provided to us, we have adjusted our project schedules and reduced our fiscal year 1996 budget request to reflect the effective utilization of these funds currently available based on, and in recognition of, our historical expenditure pattern.

These new schedules are, in our opinion, achievable and the Corps is forcing accountability for achieving them into our personal performance appraisals. In addition, we are looking at our management processes and procedures to improve our project budget and schedule execution.

We have absolute assurance from our headquarters that in the event we expend funds faster than our historical pattern, they will reprogram unobligated funds to cover our awards and contractor earnings.

The following fiscal year 1996 budget requests are based on revised schedules adjusted to reflect more realistic achievement of projects.

GENERAL INVESTIGATIONS

The Pacific Ocean Division's General Investigations request, totaling $700,000, will be used to conduct the following studies.

WAILUPE STREAM FLOOD CONTROL

For Wailupe Stream on Oahu, we are requesting $200,000 for continuation of feasibility investigations. This study involves evaluation of alternatives to provide flood protection to residential and commercial structures.

BARBERS POINT HARBOR

For Barbers Point Deep Draft Harbor on Oahu, we are requesting $200,000 to continue with feasibility phase investigations in partnership with the State of Hawaii. The study will evaluate alternatives for channel and basin modifications to accommodate increased shipping demand at the harbor.

KIKIAOLA SMALL BOAT HARBOR

For Kikiaola Small Boat Harbor on the island of Kauai, we are requesting $170,000 to continue preconstruction engineering and design activities for modifications to provide additional wave protection and reduced shoaling. The completed project will provide berthing for approximately 100 vessels.

MAUI SECOND HARBOR

For Maui Second Harbor, we are requesting $130,000 to initiate reconnaissance studies. The studies will evaluate alternative commercial harbor sites to alleviate congestion and dependency on Maui's only commercial port at Kahului Harbor.

CONSTRUCTION, GENERAL

The Pacific Ocean Division is not requesting any fiscal year 1996 Construction, General funding. Programmed carryover into fiscal year 1996, totaling $6,228,000 will be used to fully fund our requirement in fiscal year 1996.

ALENAIO STREAM FLOOD CONTROL

For Alenaio Stream on Hawaii, $2,808,000 of programmed carryover will be used to continue construction of this $15 million flood control project. The project will provide protection to residential and commercial structures in Hilo. The construction contract was awarded in November of 1994 and construction completion is scheduled in fiscal year 1997.

MAALAEA SMALL BOAT HARBOR

For Maalaea Small Boat Harbor on Maui, programmed carryover in the amount of $3,420,000 will be used to continue construction on this $11 million project. The project harbor modifications will reduce wave action and surge within the harbor and increase the berthing capacity from the existing 93 mooring spaces to a maximum capacity of 220 vessels.

As I noted earlier, construction award of the project is projected for the fourth quarter of fiscal year 1995 pending resolution of the commercial and/or recreational use of the harbor and the numerous public comments and concerns regarding water quality, endangered species and surfing issues.

Additionally, the State of Hawaii's recently projected budget deficit of $250 million may have an impact on and delay the construction start of this project in regard to cost sharing.

OPERATION AND MAINTENANCE

The Pacific Ocean Division's budget request for Operation and Maintenance totals $1,628,000 and includes funds for inspection of completed works, dredged material studies, project condition surveys, and operation of the Regional Visitor Center at Fort DeRussy.

SUMMARY

In summary, we realize that our earlier budget submissions and estimates of completion times were based on optimistic schedules. We have focused our efforts on improving our program and project execution and have already seen positive results as demonstrated by the recent construction contract awards for our Alenaio Stream and Kawainui Marsh flood control projects.

With the support of the committee, our fiscal year 1996 program request of $2,328,000 will allow the Pacific Ocean Division to continue to provide quality and environmentally sound water resources projects for the people and islands of the Pacific.

Although our civil works program and projects may be modest in comparison to some you have heard this week, they have an enormously important impact on the economic and social well-being of the island communities that we serve.

Sir, this completes my presentation. I will be pleased to answer any questions that you or the committee may have.

[The statement of General Miller follows:]

US Army Corps
of Engineers
Pacific Ocean Division

Brigadier General Henry S. Miller Jr.

Commander and Division Engineer

Brigadier General Henry S. Miller Jr. became the 19th Commander and Division Engineer of the Pacific Ocean Division, U.S. Army Corps of Engineers, headquartered at Fort Shafter, Hawaii, on July 20, 1994.

Prior to this assignment, General Miller served as the Assistant Division Commander for Support, 1st Cavalry Division, Fort Hood, Texas.

The Pacific Ocean Division's area of operation stretches across five time zones from Hawaii through Polynesia, Micronesia, Japan and Korea. As an operating division, POD has two fully staffed districts (Japan Engineer District at Camp Zama and Far East Engineer District in Seoul), and a POD headquarters staff which also functions as the staff of the third district, Honolulu Engineer District.

As commander and division engineer, General Miller has the responsibility for engineering design, construction and real estate management for the Army and Air Force in Hawaii and for all Department of Defense agencies in Japan, in the Republic of Korea, and at Kwajalein Atoll in the Marshall Islands.

The division's program includes the federal water resource management and development activities in the state of Hawaii, the territories of American Samoa and Guam, and the commonwealth of the Northern Mariana Islands. The program also expands into projects for other U.S. government agencies and for Pacific island nations, on a reimbursable basis.

General Miller's past assignments include duty with the 2nd Infantry Division, Korea; the 82nd Airborne Division, Fort Bragg, N.C.; and the 5th Special Forces Group, Republic of Vietnam. He served as a team chief and instructor, Department of Tactics, U.S. Army Command and General Staff College, and as an instructor in the Reserve Officers Training Corps Department, University of Arkansas. He served two tours at Fort Stewart, Ga., first as Executive Officer and later as Commander, 3rd Engineer Battalion, 24th Infantry Division. He also served as an Inspector General for the 24th Infantry Division.

His major staff experience has been at Headquarters U.S. Army Europe as a staff officer in the Office of the Deputy Chief of Staff, Engineer, and as an Assistant Secretary of the General Staff in the office of the Commander in Chief. He further served as a staff officer at the U.S. Army War College.

General Miller commanded the 36th Engineer Group (Combat), Fort Benning, Ga., where he participated in Operation Just Cause and Desert Shield/Desert Storm. He was Deputy Assistant Commandant of the Army Engineer School at Fort Leonard Wood, Mo., July 1991 to July 1992, and Assistant Commandant and Deputy Commanding General of Fort Leonard Wood, July 1992 to June 1993. This was followed by his assignment with the 1st Cavalry Division at Fort Hood

He is a 1966 graduate of The Citadel, The Military College of South Carolina, with a bachelor's degree in civil engineering and earned a master's in industrial engineering from the University of Arkansas in 1974. He is a graduate of the Command and General Staff College and the U.S. Army War College.

His awards include the Legion of Merit, Bronze Star with three Oak Leaf Clusters, Meritorious Service Medal with four Oak Leaf Clusters, Air Medal, and the Army Achievement Medal.

General Miller was born in Knoxville, Tenn., and grew up in Westminster, S.C. He and his wife, Mary, have four children, Sam, Katy, Emily, and Mike.

August 3, 1994

FISCAL YEAR 1996 STATUS REPORT TO CONGRESS CIVIL WORKS ACTIVITIES IN THE PACIFIC OCEAN DIVISION

BRIGADIER GENERAL HENRY S. MILLER JR., DIVISION ENGINEER

INTRODUCTION

Mr. Chairman and Members of the Committee:

I am Brigadier General Henry Miller, Commander of the Pacific Ocean Division. I am pleased to appear before you to report on the Civil Works activities of the Pacific Ocean Division and to present our program request for Fiscal Year 1996. With me today are Mr. Charlie Cheung, Director of Programs and Project Management and Mr. David Lau, Acting Chief, Civil Programs Branch.

AREA OF RESPONSIBILITY

Our area of operation for Civil Works covers over six million square miles of the Pacific Ocean and includes the State of Hawaii, the Commonwealth of the Northern Mariana Islands, and the territories of American Samoa and Guam. Although not related to our Civil Works program, the Pacific Ocean Division also has a $1.2 billion military construction mission that encompasses the State of Hawaii, Kwajalein Atoll, Japan, and the Republic of Korea.

The islands within the Division's area of responsibility offer a diversity of natural beauty, cultures, environments and economies. The islands also present many challenges that are unlike those that many of us have experienced or are accustomed to in our daily life. They include distance and travel, remoteness, and limited resources where land and the environment are exceptionally precious commodities.

The Pacific Ocean Division has a long and proud history of planning, designing, and constructing vital water resource projects that provide the virtual lifeline in many of the insular areas. These projects reduce the threat of flooding, improve navigation conditions, and deter coastal erosion and inundation. Perhaps more importantly, our projects help contribute to improving the quality of life and economic well being of the people that we serve in the Pacific.

Although our islands are beautiful, they are also vulnerable to nature's fury. Time and distance magnify the devastation created by natural disasters, large and small, and have long lasting environmental, social, and economic consequences. We are proud of our emergency response teams' ability to deploy, on a moment's notice, to provide immediate assistance when these natural disasters strike.

People, Islands, and Water are the focus of our Regional Visitor's Center and our Civil Works program in the Pacific. With these words in mind, I invite you to view the unique water resources challenges of island life and environment from the perspective of a Pacific island inhabitant. I will now highlight our Fiscal Years 1994 and 1995 activities and present our budget request for Fiscal Year 1996.

FISCAL YEAR 1994 AND 1995 ACTIVITIES

The Pacific Ocean Division's activities for Fiscal Years 1994 and 1995 include the following:

WAILUPE STREAM FLOOD CONTROL STUDY, OAHU

For the Wailupe Stream Flood Control study on Oahu, the negotiated Feasibility Study Cost Sharing Agreement was executed in February 1994. We are continuing feasibility phase investigations in Fiscal Year 1995.

BARBERS POINT HARBOR, OAHU

We completed Barbers Point Deep Draft Harbor on Oahu in 1985. At the request of the State of Hawaii, reconnaissance studies were initiated in Fiscal Year 1994 for channel and basin modifications. This request is based on the need to accommodate larger sized vessels and the expanding use of the harbor. Reconnaissance phase studies are scheduled for completion in Fiscal Year 1995.

KIKIAOLA HARBOR, KAUAI

For Kikiaola Small Boat Harbor on Kauai, preconstruction engineering and design activities were initiated in Fiscal Year 1994 for modification of this existing facility. The modifications will attenuate adverse wave conditions and allow full use of this harbor.

KAUMALAPAU HARBOR, LANAI

Kaumalapau Harbor is the island of Lanai's only commercial harbor. As directed in both the Fiscal Years 1993 and 1994 Energy and Water Development Appropriations Acts, preconstruction engineering and design activities are continuing in 1995. Activities include the preparation of a design report, environmental studies, and hydraulic model investigations.

ALENAIO STREAM FLOOD CONTROL, HAWAII

For the $15 million Alenaio Stream Flood Control project on Hawaii, a construction contract was awarded in November 1994. The project will prevent flood damages to Hilo, the urban center and County seat of the island of Hawaii.

KAWAIHAE SMALL BOAT HARBOR, HAWAII

For the Kawaihae Small Boat Harbor project on the Big Island of Hawaii, the improved breakwater and harbor facility will allow for safer operation and increased berthing capacity for commercial navigation. A revised General Reevaluation Report was completed in October 1994. Construction award of the project has been held in abeyance pending resolution of economic concerns regarding the commercial and/or recreational use of the harbor. In addition, the State of Hawaii is currently reviewing their financial capability to cost share in regard to the State's $250 million projected deficit. As a result, the project has not been included in our Fiscal Year 1996 budget request.

MAALAEA HARBOR, MAUI

The Maalaea Small Boat Harbor project on Maui is the State of Hawaii's Department of Land and Natural Resources' highest priority harbor project. The project will modify the existing harbor breakwater to eliminate adverse navigation conditions and increase the berthing capacity for commercial craft. We completed a supplemental Environmental Impact Statement in Fiscal Year 1994. Construction award of the project is projected for the fourth quarter of Fiscal Year 1995 pending resolution of the commercial and/or recreational use of the harbor and the numerous public comments and concerns regarding water quality, endangered species and surfing issues. Additionally, the State of Hawaii's recently projected budget shortfall may have an impact on construction start of this project.

KAWAINUI MARSH, OAHU

For the Kawainui Marsh Flood Control Project on Oahu, a $4.6 million construction contract was awarded in September 1994. This Continuing Authorities project will provide protection to approximately 2,000 residential, public, and commercial structures adjacent to the largest wetland in the State of Hawaii.

PORT ALLEN BREAKWATER, KAUAI

For the Port Allen Breakwater Repair project on Kauai, construction was completed in August 1994 to repair damages caused by Hurricane Iniki.

OFU HARBOR REPAIR, AMERICAN SAMOA

For Ofu Harbor in American Samoa, construction of hurricane damage repairs was completed in December 1994.

SMALL AND DISADVANTAGED BUSINESS CONTRACTING

I would now like to report on the Pacific Ocean Division's small and disadvantaged business program, which we actively participate in and support. Our prime contract awards show that small businesses, including small disadvantaged businesses and women owned small businesses, received approximately 23 percent of all contract dollars awarded in Fiscal Year 1994. Small disadvantaged businesses received 16 percent, 8(a) firms were awarded 2 percent, and women owned small businesses were provided with 1 percent of all prime contract awards.

FISCAL YEAR 1996 BUDGET REQUEST

The Pacific Ocean Division's budget request for Fiscal Year 1996 totals $2,328,000. Our request includes $700,000 for General Investigations and $1,628,000 for Operation and Maintenance. No, Fiscal Year 1996 Construction, General funding is being requested as unobligated programmed carryover will be used to fully fund our Fiscal Year 1996 requirements.

We recognize that in our enthusiasm and eagerness to respond our local sponsor's needs, we have in the past submitted budgets based on schedules that, upon hindsight, were overly optimistic. As a result, we received more than we could expend and have built up a reserve that will not be fully expended for at least two years. In Fiscal Year 1994, we expended 65 percent of the funds available and we have identified a total of $6,228,000 as programmed carryover from FY95 into FY96.

In order to fully use the funds that have already been provided to us, we have adjusted our project schedules and reduced our FY96 budget request to reflect the effective utilization of those funds currently available based on, and in recognition of, our historical expenditure pattern. These new schedules are in our opinion achievable and the Corps is forcing accountability for achieving them into our personal performance appraisals. In addition, we are looking at our management processes and procedures to improve our project budget and schedule execution.

We have absolute assurance from our headquarters, that in the event we expend funds faster than our historical pattern, they will reprogram unobligated funds to cover our awards and contractor earnings.

The following FY96 budget requests are based on revised schedules adjusted to reflect more realistic achievement of projects.

GENERAL INVESTIGATIONS

The Pacific Ocean Division's General Investigations request, totaling $700,000, will be used to conduct the following studies.

Wailupe Stream, Oahu

For Wailupe Stream on Oahu, we are requesting $200,000 for continuation of feasibility investigations. This study involves evaluation of alternatives to provide flood protection to residential and commercial structures.

Barbers Point Harbor, Oahu

For Barbers Point Deep Draft Harbor on Oahu, we are requesting $200,000 to continue with feasibility phase investigations in partnership with the State of Hawaii. The study will evaluate alternatives for channel and basin modifications to accommodate increased shipping demand at the harbor.

Kikiaola Harbor, Kauai

For Kikiaola Small Boat Harbor on the island of Kauai, we are requesting $170,000 to continue preconstruction engineering and design activities for modifications to provide additional wave protection and reduced shoaling. The completed project will provide berthing for approximately 100 vessels.

Maui Second Harbor, Maui

For Maui Second Harbor, we are requesting $130,000 to initiate reconnaissance studies. The studies will evaluate alternative commercial harbor sites to alleviate congestion and dependency on Maui's only commercial port at Kahului Harbor.

CONSTRUCTION, GENERAL

The Pacific Ocean Division is not requesting any Fiscal Year 1996 Construction, General funding. Programmed carryover into FY96, totaling $6,228,000, will be used to fully fund our requirement in FY96 for the following projects.

Alenaio Stream, Hawaii

For Alenaio Stream on Hawaii, $2,808,000 of programmed carryover will be used to continue construction of this $15 million flood control project. The project will provide protection to residential and commercial structures in Hilo. The construction contract was awarded in November 1994 and construction completion is scheduled in FY97.

Maalaea Harbor, Maui

For Maalaea Small Boat Harbor on Maui, programmed carryover in the amount of $3,420,000 will be used to continue construction on this $11 million project. The project harbor modifications will reduce wave action and surge within the harbor and increase the berthing capacity from the existing 93 mooring spaces to a maximum capacity of 220 vessels. As I noted earlier, construction award of the project is projected for the fourth quarter of Fiscal Year 1995 pending resolution of the commercial and/or recreational use of the harbor and the numerous public comments and concerns regarding water quality, endangered species and surfing issues. Additionally, the State of Hawaii's recently projected budget deficit of $250 million may have an impact on and delay the construction start of this project in regard to cost sharing.

OPERATION AND MAINTENANCE

The Pacific Ocean Division's budget request for Operation and Maintenance totals $1,628,000 and includes funds for inspection of completed works, dredged material studies, project condition surveys, and operation of the Regional Visitor Center at Fort DeRussy.

SUMMARY

In summary, we realize that our earlier budget submissions and estimates of completion times were based on optimistic schedules. We have focused our efforts on improving our program and project execution and have already seen positive results as demonstrated by the recent construction contract awards for our Alenaio Stream and Kawainui Marsh flood control projects.

With the support of this committee, our Fiscal Year 1996 program request of $2,328,000 will allow the Pacific Ocean Division to continue to provide quality and environmentally sound water resources projects for the people and islands of the Pacific.

Although our Civil Works program and projects may be modest in comparison to some you will hear this week, they have an enormously important impact on the economic and social well being of the island communities that we serve.

This completes my presentation. I will be pleased to answer any questions that you or any committee members may have.

[CLERK'S NOTE.—The justification sheets for the Pacific Ocean Division follow:]

JUSTIFICATION OF ESTIMATES FOR CIVIL FUNCTIONS ACTIVITIES
DEPARTMENT OF THE ARMY
FISCAL YEAR 1996

PACIFIC OCEAN DIVISION

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6 February 1995

JUSTIFICATION OF ESTIMATES FOR CIVIL FUNCTIONS ACTIVITIES
DEPARTMENT OF THE ARMY
FISCAL YEAR 1996

SUMMARY PACIFIC OCEAN DIVISION

	FY 1995 Allocations $	FY 1996 Request $	Increase or Decrease $
General Investigations			
Survey	338,000	530,000	+192,000
Preconstruction Engineering and Design	191,000	170,000	-21,000
Subtotal General Investigations	(529,000)	(700,000)	(+171,000)
Construction, General	3,015,000	0[1]	-3,015,000
Construction	(3,015,000)	(0)	(-3,015,000)
Operation and Maintenance, General			
Project Operation	1,017,000	1,105,000	+88,000
Project Maintenance	1,229,000	523,000	-706,000
Subtotal Operation and Maintenance	(2,246,000)	(1,628,000)	(-618,000)
GRAND TOTAL, PACIFIC OCEAN DIVISION	5,790,000	2,328,000	-3,462,000

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[1] Excludes $6,228,000 in unobligated carryover from prior years that is being programmed for use in FY 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
1. SURVEYS - NEW					
a. Navigation Studies: The amount of $130,000 is requested in Fiscal Year 1996 to initiate one reconnaissance study.					
HAWAII					
Maui Second Harbor, Maui, HI	200,000	0	0	130,000	70,000

The island of Maui, located approximately 100 miles southeast of Honolulu, is the second largest in size of the eight major islands of Hawaii. Maui consists of 728 square miles of land area and 120 miles of coastline and is the economic center for Maui County which also includes the islands of Molokai, Lanai, and Kahoolawe. Maui County has the second largest economy in the state after the City and County of Honolulu. Wailuku town, location of the Maui County seat, is on the north side of the isthmus which separates the two volcanic cones that formed the island. Kahului town, approximately 2 miles east of Wailuku, is the site of Maui's only commercial port, Kahului Harbor. Commercial activities for the island are centered around the population centers of the Kahului-Wailuku area.

Maui's expanding economy has resulted in increased pressures on Kahului Harbor's limited facilities. Congestion at the harbor currently results in scheduling conflicts and excess cargo handling at an average annual cost of $62,000. The growth trend in cargo tonnage moving through Kahului Harbor was 6 percent per year between 1970 and 1991, and is projected at 3 percent per year though the year 2010.

Kahului Harbor is Maui's only deep draft harbor and an accidental closure due to a shipping accident or other natural disaster would leave Maui with no alternative port. An accidental closure is projected to last 20-40 days and could result in an average annual economic disruption of $1.3 to $2.4 million due to emergency food shipments, construction industry disruptions, wholesale and retail sales losses, and increased transportation costs once the harbor reopens. Other potential impacts include petroleum shortages, power generation disruptions, and agricultural revenue losses. Virtually every segment of Maui's $2.6 billion economy (gross business receipts) would experience an economic impact.

In 1991, the State Legislature passed an act to fund a study to assess alternative second commercial harbor sites on Maui. In response to the act, the State of Hawaii Department of Transportation requested assistance from the Honolulu Engineer District in conducting the study. A Memorandum of Agreement was executed on October 5, 1992, under the authority of the Intergovernment Cooperation Act, 31 U.S.C. 6505 - Reimbursable Services to State and Local Governments. The reimbursable study, completed in January 1995, investigated alternative harbor sites to relieve congestion at Kahului Harbor and alleviate Maui's one-harbor dependency. Studies conducted included archaeological, geologic, engineering, economic, real estate, and environmental evaluations. The State of Hawaii, Department of Transportation submitted a letter in November 1994 requesting a study be conducted to determine Federal interest in potential solutions for a second commercial harbor on the island of Maui. The local sponsor fully understands the feasibility study and construction cost-sharing requirements.

Study	Total Estimated Federal Cost	Allocation Prior to FY 1995	Allocation FY 1995	Tentative Allocation FY 1996	Additional to Complete After FY 1996
	$	$	$	$	$

1a. Surveys-New: Navigation, Hawaii, Maui Second Harbor, Maui, (Continued)

Authorization to conduct the reconnaissance study is provided under Section 209 of the River and Harbor Act of 1962 (P.L. 87-874). Fiscal Year 1996 funds will be used to initiate the reconnaissance phase at full Federal expense. Studies will concentrate on evaluation of Federal interest in a second commercial harbor for Maui. Additional engineering studies, economic analyses, real estate appraisals, and environmental evaluations and coordination, are required to supplement and incorporate the results of the reimbursable study report into a Federally acceptable reconnaissance study. The State of Hawaii is the local sponsor. The reconnaissance report is scheduled for completion in October 1996, which is 12 months from initial funding.

1b. Flood Damage Prevention Studies: None.

1c. Shoreline Protection Studies: None.

1d. Special Studies: None.

1e. Comprehensive Studies: None.

1f. Project Review Studies: None.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
2. SURVEYS - CONTINUING					
a. Navigation Studies: The amount of $200,000 is requested in Fiscal Year 1996 to continue one feasibility study.					
HAWAII					
Barbers Point Harbor Modification, Oahu, HI	1,075,000	256,000	138,000	200,000	481,000

Barbers Point Harbor is located on the Ewa plains along the western coast of the island Oahu, Hawaii, approximately 20 road miles west of Honolulu and is situated adjacent to the 1,367-acre James Campbell Industrial Park (Oahu's major industrial area) and the 800-acre Kapolei Business Park. The harbor was originally intended to serve as a deepwater relief harbor for the port of Honolulu and to service the shipping requirements of the industries at Campbell Industrial Park, thus eliminating or reducing the need for considerable overland transshipment expense involved in importing and exporting via Honolulu Harbor and the congested Honolulu metropolitan area. However, the rapid development and growth of the Ewa plains region and the establishment of the City of Kapolei as Oahu's second urban center near Barbers Point have placed increased importance and demand on the harbor to service the growing communities, businesses, and industries in the Ewa area. The amount of cargo processed through Barbers Point Harbor has increased by 1,300 percent from its completion in 1985 thru 1991. Within the next ten years it is projected that total tonnage for Barbers Point Harbor will continue to increase due to the ongoing development of West Oahu. To meet the increased and growing demand in the area, both current and potential users of Barbers Point Harbor have identified the need to deepen and expand the harbor to accommodate larger sized vessels. The present harbor depth of 38 feet increases transportation costs to shippers as they must light-load larger vessels or continue to use less efficient smaller ones.

The potential sponsor is the State Department of Transportation. They recognize the critical role that the harbor plays and have contributed $346,000 to conduct both numerical and hydraulic model and navigation studies for various deepening and expansion alternatives for the harbor in conjunction with the Corps' Monitoring of Completed Coastal Projects program. The State fully understands the cost-sharing requirements to conduct the feasibility study and is fully committed to active participation with the Corps of Engineers. The reconnaissance study is addressing the problems, needs, and opportunities for the deepening and expansion of Barbers Point Harbor to service larger sized vessels than the harbor was originally designed to accommodate and also evaluating the engineering and economic feasibility as well as the environmental impacts.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase at full Federal expense and continue into the feasibility phase of the study once the feasibility cost-sharing agreement (FCSA) is executed. The reconnaissance report is scheduled for completion in June 1995 and the FCSA is scheduled to be executed with the local sponsor in October 1995.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $

2a. Surveys-Continuing: Navigation, Hawaii, Barbers Point Harbor Modification, Oahu, (Continued)

The estimated cost of the feasibility phase is $1,400,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$1,775,000
Reconnaissance Phase (Federal)	$375,000
Feasibility Phase (Federal)	$700,000
Feasibility Phase (Non-Federal)	$700,000

A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
2b. Flood Damage Prevention Studies: The amount of $200,000 is requested in Fiscal Year 1996 to continue one feasibility study.					
HAWAII					
Wailupe Stream Flood Control Study, Oahu, HI	1,016,000	302,000	200,000	200,000	314,000

The Wailupe Stream drainage basin is located along the southeast coast of the Island of Oahu, the population, economic and governmental center of the State of Hawaii. The Wailupe Stream basin extends from the Koolau Range to Maunalua Bay and is bounded by Hawaii Loa and Wiliwilinui Ridges. The rectangular shaped drainage basin of 3.2 square miles was formed by stream erosion of the Koolau mountain range, and is about 3.5 miles long and averages less than a mile wide. The valley floor, especially the coastal lowland area, is highly developed as the Aina Haina residential district. Several floods have occurred within the Wailupe Stream since Aina Haina was developed. Damages from the flood of March 5-6, 1958 and December 16-18, 1967 were significant and pointed to the need for additional flood protection. The flood of March 1958 resulted from high-intensity rainfall which caused flooding in numerous areas around the island. The Wailupe Stream drainage basin sustained flooding because of inadequate channel capacity. Accumulated boulders and debris along the stream also impeded the flood flows. Large quantities of silt, bouldere and debris carried downstream during the storm further reduced the stream capacity along the lower reach. The resulting overbank flows, together with overland sheet flows, inundated residential and commercial properties and Kalanianaole Highway. The December 1967 flood resulted from overland sheet flow and overbanking of Wailupe Stream. The flood had a peak discharge of 3,600 cfs, the highest recorded for this stream. Flooding was most severe along both banks downstream of Kalanianaole Highway. Although accurate damage estimates are not available, it was reported that damages would have been much higher if the channel had not been cleared by the City and County maintenance crews shortly before the flood.

The Urban Flood Control reconnaissance study concluded that the Wailupe Stream drainage basin has the potential for substantial flood damages. Within the Wailupe floodplain, there are more than 900 residential and commercial structures. Estimated inundation damage by the 100-year storm under existing conditions is more than $34 million. The potential for high velocity flows during rare storms adds to the risks of health and safety of the residents. Total structure and contents value at Wailupe is estimated at more than $100 million. Probable solutions being evaluated include debris flow retention structures, concrete and riprap lined channel sections, bridge modifications and necessary lands, easements and rights-of-way for the construction and operation of these structures. Local sponsors, the State of Hawaii and the City and County of Honolulu, provided letters of support in March 1993 and the FCSA was executed in February 1994.

Fiscal Year 1995 funds are being used to continue feasibility level economic, hydrologic, hydraulic, and environmental investigations. Fiscal Year 1996 funds will be used to continue these investigations and initiate geological studies. The preliminary estimated cost of the feasibility phase is $1,680,000, which is shared on a 50-50 basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of cost sharing is as follows:

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Pacific Ocean Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
2b. Flood Damage Prevention Studies: Hawaii, Wailupe Stream Flood Control Oahu, (Continued)					
Total Estimated Study Cost		$1,856,000			
Reconnaissance Phase (Federal)		$176,000			
Feasibility Phase (Federal)		$840,000			
Feasibility Phase (Non-Federal)		$840,000			

The reconnaissance report for the Urban Flood Control Study was completed in May 1992. A completion date is being determined for this feasibility study.

2c. Shoreline Protection Studies: None.

2d. Special Studies: None.

2e. Comprehensive Studies: None.

2f. Project Review Studies: None.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
3. PRECONSTRUCTION ENGINEERING AND DESIGN - NEW					
a. Navigation: None.					
b. Flood Control: None					
c. Shoreline Protection: None.					
d. Multiple Purpose Projects: None.					
4. PRECONSTRUCTION ENGINEERING AND DESIGN - CONTINUING					
a. Navigation: The amount of $170,000 is requested in Fiscal Year 1996 to continue PED for one project.					
HAWAII					
Kikiaola Small Boat Harbor, Kauai, HI	798,000	335,000	191,000	170,000	102,000

Kikiaola Harbor is located on the southwest coast of the island of Kauai, about 1 mile southeast of Kekaha and approximately 3 miles northwest of Waimea. The State of Hawaii operates Kikiaola Harbor and originally constructed the harbor in 1959. The existing harbor has a natural depth of 6 feet at the entrance which frequently produces steep breaking waves. Navigating this channel is hazardous and breaking waves often prevent craft from entering or leaving the harbor. The east breakwater is too low and major overtopping occurs during storms. The shallow, narrow entrance channel and overtopping waves severely limit the utilization of the existing harbor. Other navigation problems include the lack of protective berthing, inadequate shoreside facilities, and shoaling in the channels and harbor basin. Modification to the harbor will allow full development of adequate facilities to serve the navigation needs of the area, and also serve as a haven for refuge during storms. A General Design Memorandum (GDM) and Final Environmental Impact Statement (EIS) were completed in September 1980 and approved by the Director of Civil Works in September 1981. The recommended plan would provide berthing for about 105 boats. The plan of improvement consists of dredging a 725-foot long, 105 to 205-foot wide and 12-foot deep entrance channel; dredging a 320-foot long 70 to 105-foot wide, 8-foot deep access channel; removing 150 feet from the existing outer east stub breakwater; raising the east breakwater crest by 3-4 feet and resloping the seaward slope of the east breakwater; removal and reconstruction of the 85 foot long inner east stub breakwater; and modification of 220 feet of the existing west breakwater. The estimated cost of the recommended project is $6,510,000 with an estimated Federal cost of $5,775,000, including US Coast Guard cost of $20,000, and an estimated non-Federal cost of $735,000. The average annual benefits, as indicated in the GDM, amount to $274,000, primarily attributed to recreation navigation. The benefit to cost ratio is 1.2 to 1. The project sponsor is the State Department of Land and Natural Resources. The local sponsor has indicated State planning and construction funds for Kikiaola Harbor will be included in its Fiscal Year 1996-1997 biennial budget.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $

4a. Preconstruction Engineeering and Design-Continuing: Navigation, Hawaii, Kikiaola Small Boat Harbor, Kauai (Continued)

The project was authorized by Section 101 of the River and Harbor Act of 1968 (PL 90-483). Cost sharing requirements are 90% Federal and 10% non-Federal during construction of the navigation portion of the project as outlined under the Water Resource Development Act of 1986.

Fiscal Year 1995 funds are being used to complete the supplemental EIS and harbor numerical model study, and initiate the preparation of construction plans and specifications. Fiscal Year 1996 funds will be used to continue plans and specifications. A completion date is being determined for this preconstruction engineering and design effort.

4b. Flood Control: None

4c. Shoreline Protection: None.

4d. Multiple Purpose Projects: None.

APPROPRIATION TITLE: Construction, General - Local Protection Projects (Flood Control)

PROJECT: Alenaio Stream, Hawaii, Hawaii (Continuing)

LOCATION: Alenaio Stream is situated in Hilo, the principal urban center in the South Hilo District and the county seat for the island of Hawaii, State of Hawaii.

DESCRIPTION: The recommended plan consists of about 1,790 feet of concrete-lined channel; a 200-foot wedge-shaped concrete entrance transition; about 830 feet of earth levee; approximately 490 feet of concrete floodwall; 450 feet of concrete-rubble-masonry floodwall; four bridge replacements; removal of one public, one business, and six residential structures; access roads for channel construction and maintenance, and the incorporation of floodplain management regulations in undeveloped areas. An earth channel will connect the concrete channel to the existing Waiolama Canal.

AUTHORIZATION: Section 401(a) of the Water Resources Development Act of 1986 (Public Law 99-662) and Section 102(k) of the Water Resources Development Act of 1990 (Public Law 101-640).

REMAINING BENEFIT-REMAINING COST RATIO: 1.5 to 1 at 8 7/8 percent.

TOTAL BENEFIT-COST RATIO: 1.2 to 1 at 8 7/8 percent.

INITIAL BENEFIT-COST RATIO: 1.2 to 1 at 8 7/8 percent (FY 1991).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation report approved in July 1989 which was revalidated in May 1994 at October 1994 price levels.

SUMMARIZED FINANCIAL DATA		
Estimated Federal Cost		$10,649,000
Estimated Non-Federal Cost		4,512,000
Cash Contribution	$ 758,000	
Other Costs	3,754,000	
Total Estimated Project Cost		$15,161,000

STATUS (1 JAN 1995)	PERCENT COMPLETE	COMPLETION SCHEDULE
Entire Project	3	Sep 1997

SUMMARIZED FINANCIAL DATA (Continued)		ACCUM PCT OF EST FED COST
Allocations to 30 September 1994	$4,490,000	
Conference Allowance for FY 1995	1,732,000	
Allocation for FY 1995	2,829,000 1/	
Allocations through FY 1995	7,319,000 2/	69
Allocation Requested for FY 1996	0	69
Programmed Balance to Complete after FY 1996	3,330,000	
Unprogrammed Balance to Complete after FY 1996	0	

1/ Reflects $274,000 reduction for savings and slippage, $1,371,000 reprogrammed to the project.

2/ Reflects $2,808,000 in programmed carryover into FY 1996.

PHYSICAL DATA

Channel:
  Unlined Trapezoidal
    Length - 340 feet
    Width - 60 feet
    Depth - 5-6 feet
  Concrete/Transition
    Length - 1,987 feet
    Width - 30-51 feet
    Depth - 10.8 feet

Levee:
  Length - 830 feet
  Height - 3-9 feet

Floodwalls
  Length - 940 feet
  Height - 2-10 feet

JUSTIFICATION: Flood damages in the Alenaio Stream basin result from inadequate channel capacity and debris accumulation and blockage at bridge openings. Seven occurrences of significant flooding have occurred since 1920. The present value of the 223 residential and 286 commercial structures within the floodplain is $40,000,000. The average annual damages, with and without the project, are $40,000 and $1,475,000, respectively. The average annual flood damages are $1,436,000 and $39,000 to commercial and residential structures, respectively. The project would provide a 100-year level of protection. The maximum flood of record occurred on July 25, 1966 when four homes were demolished, 15 homes damaged, and over 100 business establishments in downtown Hilo were inundated with as much as two feet of water. Thirty-four people were evacuated and three were injured. One policeman narrowly escaped death when he was swept downstream during rescue operations. The damages sustained at that time have been estimated at $4,194,000. Damages begin with an event of approximately 10-year frequency. Duration of flooding is relatively brief with most damages caused by inundation of the contents of various business establishments. The project is located within a highly urbanized area and would have no adverse impacts on the natural environment.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $0 and $2,808,000, respectively, will be applied as follows:

Continue Levee Construction	$ 250,000
Continue Floodwall Construction	2,264,000
Engineering and Design	11,000
Construction Management	283,000
Total	$2,808,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Provide lands, easements, rights-of-way and dredged material disposal areas.	$1,113,000	
Modify or relocate utilities, roads, bridges, and other facilities, where necessary in the construction of the project.	2,641,000	
Bear all costs of operation, maintenance, and replacement of flood control facilities.		$30,000
Pay, in cash, 5 percent of the total project costs.	758,000	
Total Non-Federal Costs	$4,512,000	$30,000

The non-Federal sponsor has agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The County of Hawaii is the non-Federal sponsor. The Local Cooperation Agreement was executed on April 27, 1992.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $10,649,000 is an increase of $555,000 from the last estimate ($10,094,000) presented to Congress (FY 1994). This change is due to price escalation on construction features ($156,000) and schedule changes ($399,000).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Survey Report and Final Environmental Impact Statement was filed with EPA in July 1982. An Environmental Assessment was included with the General Design Memorandum, dated March 1990, to address changes to the project since authorization.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1988 and funds to initiate construction were appropriated in FY 1992. The construction contract was awarded in November 1994.

APPROPRIATION TITLE: Construction, General - Channels and Harbors (Navigation)

PROJECT: Maalaea Harbor, Maui, Hawaii (Continuing)

LOCATION: Maalaea Bay is situated on the southwest coast of Maui, approximately 7 miles south of Wailuku, the county seat of Maui, State of Hawaii.

DESCRIPTION: The authorized plan consists of improvements to an existing State-owned facility initially constructed by the State of Hawaii in 1952. The plan includes a 620-foot long extension of the south breakwater, a new 610-foot long, 150- to 180-foot wide, 12- to 15-foot deep entrance channel, a 1.7-acre and 12-foot deep turning basin and a 720-foot long, 80-foot wide and an 8-foot deep access channel. The improvements will allow an increase in berthing capacity from the existing 93 mooring spaces to a maximum capacity of 220 vessels.

AUTHORIZATION: Section 101 of the Rivers and Harbors Act of 1968 (Public Law 90-483) in accordance with provisions contained in House Document No. 353, 90th Congress, 2nd Session, dated July 8, 1968.

REMAINING BENEFIT-REMAINING COST RATIO: 3.3 to 1 at 3-1/4 percent.

TOTAL BENEFIT-COST RATIO: 2.5 to 1 at 3-1/4 percent.

INITIAL BENEFIT-COST RATIO: 5.6 to 1 at 3-1/4 percent (FY 1990). The benefit-cost ratio is based on the project functioning independently.

BASIS OF BENEFIT-COST RATIO: Benefits are based on a reevaluation completed in May 1994 at October 1994 price levels.

SUMMARIZED FINANCIAL DATA	
Estimated Appropriation Requirement (CofE)	$9,439,000
Estimated Appropriation Requirement (USCG)	20,000
Estimated Total Appropriation Requirement	$9,459,000
Future Non-Federal Reimbursement	1,039,000
Estimated Federal Cost (Ultimate)	$8,420,000

STATUS (1 JAN 1995)	PERCENT COMPLETE	COMPLETION SCHEDULE
Entire Project	0	Being Determined

SUMMARIZED FINANCIAL DATA (Continued)

			ACCUM PCT OF EST FED COST
Estimated Non-Federal Cost		$2,098,000	
Cash Contributions	$1,049,000		
Other Costs	10,000		
Reimbursements	1,039,000		
Total Estimated Project Cost		$10,518,000	
Allocations to 30 September 1994		$4,662,000	
Conference Allowance for FY 1995		1,170,000	
Allocation for FY 1995		186,000 1/	
Allocations through FY 1995		4,848,000 2/	51
Allocation Requested for FY 1996		0	51
Programmed Balance to Complete after FY 1996		4,591,000	
Unprogrammed Balance to Complete after FY 1996		0	

PHYSICAL DATA

Entrance Channel:
Length - 610 feet
Width - 150 to 180 feet
Depth - 12 to 15 feet

Turning Basin:
Area - 1.7 acres
Depth - 12 feet

Breakwater Extension
Length - 620 feet

Access Channel:
Length - 720 feet
Width - 80 feet
Depth - 8 feet

1/ Reflects $185,000 reduction for savings and slippage and $799,000 reprogrammed from the project.

2/ Reflects $3,420,000 in programmed carryover into FY 1996.

JUSTIFICATION: Vessels moored in the existing State-owned facility at Maalaea Harbor have experienced surge and wave action from ocean swells generated by storms occurring in the southern hemisphere. The existing entrance channel is open to southerly swells and storm waves which directly enter the harbor basin causing damages to the vessels moored inside. The surge action renders much of the harbor basin unusable for safe mooring of vessels. The enlargement, deepening and the relocation of the entrance channel and extension of the existing south breakwater would reduce surge and wave action within the basin. These improvements would also increase the usable harbor basin area allowing Maui District boaters currently awaiting slips at Maalaea to safely wet-store their vessels at the harbor and providing safer navigation conditions for vessels using the facility. The harbor, when fully developed, would have a basin area of 13.5 acres with a maximum capacity of approximately 220 boats. Annual benefits for the project are summarized below:

Annual Benefits	Amount
Commercial Passenger	$1,128,000
Commercial Fishing	110,000
Recreational Boating	16,000
Total	$1,254,000

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $0 and $3,420,000 respectively, will be applied as follows:

Continue Breakwater Construction	$2,580,000
Continue Harbor Dredging	523,000
Engineering and Design	30,000
Construction Management	287,000
Total	$3,420,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Provide lands, easements, rights-of-way, and dredged material disposal areas.	$ 10,000	
Pay 10 percent of the costs allocated to general navigation facilities during construction.	1,049,000	
Reimburse an additional 10 percent of the costs of general navigation features allocated to commercial navigation within a period of 30 years following completion of construction, as partially reduced by a credit allowed for the value of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas provided for commercial navigation.	1,039,000	
Total Non-Federal Costs	$2,098,000	$0

The non-Federal sponsor has agreed to make all required payments concurrently with project construction and reimburse its share of construction costs over a period of 30 years following completion of construction.

STATUS OF LOCAL COOPERATION: The non-Federal sponsor is the State of Hawaii. In June 1991, the State Department of Transportation reaffirmed their willingness to share the cost of project implementation, estimated at $10,518,000. The project cooperation agreement has been coordinated with the State of Hawaii and is scheduled to be executed in May 1995. The entire local share of the project first costs was appropriated by the 1989 State of Hawaii Legislature for the Harbors Division Capital Improvements Program (CIP) for the fiscal 1990-1991 biennium.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal (Corps of Engineers) cost estimate of $9,439,000 is an increase of $759,000 from the last estimate ($8,680,000) presented to Congress (FY 1994). This change is due to reapportionment of the Federal/Nonfederal cost sharing based on the 1994 benefit reevaluation.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS was filed with the EPA on April 28, 1980. An SEIS was completed in July 1994.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1979. Funds to initiate construction were appropriated in FY 1990. Construction contract award is scheduled for July 1995.

PACIFIC OCEAN DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. NAVIGATION

a. Channels and Harbors.

The program request of $143,000 provides for salaries, maintenance of display and slide projection rooms and materials essential in the operation of the Regional Visitors Center.

STATE	OBLIGATIONS		
Project Name	Estimated FY 1995 ($) Total (Operations) (Maintenance)	Estimated FY 1996 ($) Total (Operations) (Maintenance)	EXPLANATION OF MAJOR CHANGES 1. Reasons for change in Operations from FY 1995 to FY 1996 (10% +/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
AMERICAN SAMOA			
Projects Periodically Maintained	1,185,000 (1,185,000) (0)	0 (0) (0)	1. None. 2. None.
HAWAII			
Barbers Point Harbor	144,000 (100,000) (44,000)	143,000 (100,000) (43,000)	1. None 2. None.
Projects Periodically Maintained	634,000 (634,000) (0)	0 (0) (0)	1. None. 2. None.
TOTAL - NAVIGATION	1,963,000 (734,000) (1,229,000)	143,000 (100,000) (43,000)	

PACIFIC OCEAN DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. FLOOD CONTROL

a. Reservoirs. None

b. Channel Improvements, Inspection and Miscellaneous.

The program request of $960,000 provides for model testing at the Waterways Experimental Station and an annual survey for a long term sedimentation characteristic analysis of flood control projects.

STATE Project Name	OBLIGATIONS Estimated FY 1995 ($)	 Estimated FY 1996 ($)	EXPLANATION OF MAJOR CHANGES
	Total	Total	
	(Operations)	(Operations)	1. Reasons for change in Operations from FY 1995 to FY 1996 (10% +/-)
	(Maintenance)	(Maintenance)	2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
Iao Stream	0	480,000	
	(0)	(0)	1. None.
	(0)	(480,000)	2. None.
Inspection of Completed Works	10,000	480,000	
	(10,000)	(480,000)	1. Conduct underwater inspections and additional aerial photos in FY96.
	(0)	(0)	2. None.
TOTAL - FLOOD CONTROL	10,000	960,000	
	(10,000)	(480,000)	
	(0)	(480,000)	

PACIFIC OCEAN DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

3. **MULTIPLE PURPOSE POWER PROJECTS:** None

4. **PROTECTION OF NAVIGATION**

The program request of $525,000 provides for condition surveys of eleven harbors in FY96, to include harbor underwater surveys, as well as inspection of breakwaters last inspected during March thru September 1995.

STATE	OBLIGATIONS		
Project Name	Estimated FY 1995 ($)	Estimated FY 1996 ($)	EXPLANATION OF MAJOR CHANGES
	Total	Total	
	(Operations)	(Operations)	1. Reasons for change in Operations from FY 1995 to FY 1996 (10% +/-)
	(Maintenance)	(Maintenance)	2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
Project Condition Surveys	273,000	525,000	
	(273,000)	(525,000)	1. Hydrographic surveys of channel conditions in FY96.
	(0)	(0)	2. None
TOTAL - PROTECTION OF NAVIGATION	273,000	525,000	
	(273,000)	(525,000)	
	(0)	(0)	
GRAND TOTAL - PACIFIC OCEAN DIVISION	2,246,000	1,628,000	
	(1,017,000)	(1,105,000)	
	(1,229,000)	(523,000)	

ADMINISTRATION'S PROPOSED POLICY

Mr. MYERS. Thank you, General Miller.

The question we are asking is about the impact of the proposed changes in the criteria. With your islands' responsibilities, it might have an impact on you. Have you had the chance to survey and decide what impact this is going to have if this becomes a reality?

General MILLER. Sir, as I understand the rules, the flood control program will—I won't say come to an absolute stop, but it may approximate something in that definition. In the navigation area, the harbor at Honolulu, certainly Barbers Point and we believe the alternative second commercial harbor study on Maui will still quality under the rules. Navigation projects such as small boat harbors we believe will be impacted and won't be supportable. Shore protection certainly will be impacted.

Mr. MYERS. Many of your projects are small boat harbors, recreational in nature. Maui has both. Is there some criteria regarding what percentage has to be commercial before it will fall into the protected zone?

General MILLER. Yes sir, greater than 50 percent of the benefits must be commercial. The Kahului Harbor on Maui is a large commercial harbor. The reason for us looking at that project is because of its location and the way it is constructed, there are any number of things that could cause that harbor to be unusable.

The study is looking at a couple of things. One is an alternative second harbor site and the other is modifications to the existing harbor. But it clearly falls in the commercial arena. Large barges moving cargo from Oahu over to Maui are the primary vessels you see there. Plus, tourist ships you see coming in and out. This is not classified as a small boat harbor.

Mr. MYERS. I know it wasn't, but as I recall being there, it seemed like a lot of small craft.

General MILLER. Certainly they use it, yes, sir.

Mr. MYERS. We are going to have some problems with that, as we heard discussed, and certainly the communities where your flood control goes right down through residential areas, commercial areas, would be disastrous. I have been there when you have had some floods, and I don't know how—is the State of Hawaii realizing what may happen to them here?

General MILLER. Sir, I think they are in the early stages of recognition. Right now with the new state administration, the Governor is still going through some issues with his budget and hasn't had a chance to focus on the details of some of these programs.

Mr. MYERS. Many of these are still in reconnaissance stage, which you are paying for right now, but when they go into preconstruction and engineering, what is going to happen then?

Of course, I think we are talking about something that is not going to happen, but assuming that Congress should go along with the present administration, I think there is some serious reservations, but I presume then you will probably advance to reconnaissance.

If I were Governor of the State or in the legislature over there, I wouldn't want to put the money in if you are not going to go beyond that, unless they are capable of meeting the construction requirements, they will have to come up with it. It is a real problem with you unlike some other States. California has a similar situation as you.

General MILLER. That appears to be correct, sir.

Mr. MYERS. Is there any mechanism to let the State know what is going to happen to them, and local communities. Have you had hearings yet?

General MILLER. We have not had hearings. We have a close working relationship with the Governor and his staff. Members of my staff sit on his weekly staff meetings. We are working with his folks. He has just gone through putting in a new administration. It seems like he has changed a lot of people. So we are still working through that new organizational structure.

Mr. MYERS. Possibly you shouldn't. I won't tell you what to do with your Corps, I have enough problems trying to do what we do here, but it seems like Congress is not going to go along with this, but it could happen, I don't know.

POD CIVIL WORKS PROGRAM

Congressman Abercrombie has some questions here, one which I share. How does the Pacific Ocean Division Civil Works program benefit the insular and island communities? That is a big question. It might take the rest of the morning.

General MILLER. I will try to make it simple. Obviously, from the work we have done out there, the products we have put on the ground have helped a lot of people. We believe that the Corps, in its 90 years or so in the Pacific Ocean area, has had a tremendous impact on raising the awareness and standards in the different approaches to engineering throughout the islands. And quite frankly, in some of the islands out there, we are the only Federal agency they see.

They certainly are very supportive, patriotic, and every other word you could use to describe that feeling. So we get a very good reception and in turn I think we have given them a very good product.

The other piece that I think is very important relates to emergency response. The relationships that we have established, not only with the islanders throughout the Pacific, but also with FEMA in the Pacific has given us an early entry into an awful lot of those areas when disasters occur, and they do have a lot of storms. For their particular cultures, disasters become devastating and have a large impact on small things that we might not notice in Washington, D.C. I think that is the biggest contribution in the overall scheme of things.

JOHNSTON ISLAND

Mr. MYERS. What can you tell us about the work in Johnston Island?

General MILLER. We don't have that in our area of responsibility, although it is military construction. The Navy has Johnston Island.

Mr. MYERS. Is there testing going on there?

General MILLER. The Army basically runs the program out there but the Navy has the engineering support for the military on Johnston Island.

Mr. MYERS. The testing of the various products they are trying to destroy, the toxic material, doesn't the Army conduct those studies?

General MILLER. Sir, the Army does the work but, the Corps of Engineers is not involved in that. We did help to build some of the facilities through the Huntsville District and we assisted them in that work, as I understand it. It was prior to my time. But, we don't have any current work going on in Johnston Island right now.

PACIFIC OCEAN DIVISION WORKLOAD

Mr. MYERS. For the record, would you provide how much of your work is done for civil, how much is done for others, and how much is done for military?

General MILLER. Yes, sir, we can do that.

[The information follows:]

PACIFIC OCEAN DIVISION WORKLOAD

[In millions of dollars]

	Fiscal year 1995	Estimated fiscal year 1996
Military	1,200	1,200
Civil works	12	20
Support for others	18	20

Mr. MYERS. Mr. Bevill.

Mr. BEVILL. Thank you, Mr. Chairman. General, you must be the luckiest general in the Army to have this assignment. Maybe it looks a lot better than it is. I guess it depends on how many storms you have.

General MILLER. Yes, sir, it does.

CONTINUING AUTHORITIES PROGRAM

Mr. BEVILL. What work do you have planned for fiscal year 1996 under the various continuing authorities program?

General MILLER. Sir, we have—Kawainui Marsh is probably the best example that we have. I would add that under the new rules a large number of those probably wouldn't qualify for continuing to the next phase.

Mr. BEVILL. How many of those, do you know?

General MILLER. Sir, I would say estimate about 18 out of those 20 could be impacted on by the new rules.

Mr. BEVILL. So that is—we are talking about millions of dollars.

General MILLER. Yes, sir.

Mr. BEVILL. Preparation, preconstruction?

General MILLER. Only those in the construction phase would not be impacted.

Mr. BEVILL. And that is about 18?

General MILLER. Yes, sir.

Mr. BEVILL. So there is millions of dollars that will really just go down the drain unless the local government can handle it, and they can't, is that right?

General MILLER. I would assume that that is correct, sir.

Mr. BEVILL. Well, you know it is correct. So actually 18 out of, what, 20?

General **Miller**. Yes, sir.

Mr. **Bevill**. So you will be able to do two of the projects that need to be done. Twenty projects that the people need, only two of them will be done.

General **Miller**. Two would qualify under the rules, yes, sir.

Mr. **Bevill**. Well, I wish you would expand on that as much as you can in the record as to what in dollars and cents, how much is invested. This is the money that will just be left there. I mean, it is just wasted.

General **Miller**. We can do that, yes, sir.

Mr. **Bevill**. I would like to have that. We may want to talk a little bit about that on the Floor of the House. Maybe in the full committee.

I appreciate you doing it. Mr. Chairman, that is all I have.

[The information follows:]

CONTINUING AUTHORITIES PROGRAM

We currently have a total of 17 active Continuing Authorities Program projects underway in FY 1995 as listed below. This consists of 8 projects under Section 14 Emergency Protection, 1 under Section 103 Shoreline Protection, 2 under Section 107 Navigation, and 6 under Section 205 Flood Control. Based on the current schedule 5 projects would be impacted by the program phase out. Under the Administration's proposal for the phase out of the Continuing Authorities Program, any project approved before FY 1997 will be constructed, and only construction funding for approved projects will be provided after FY 1996.

Project Name	Section	Scheduled Construction Approval	Expended To Date ($000)
Emergency Streambank			
Agat South, Guam	14	Aug 95	55.0
Alii Drive, Hawaii	14	Sep 95	40.0
Garapan Beach Rd, CNMI	14	Oct 95	40.0
Hauula Highway, Oahu	14	May 95	57.0
Kaaawa Highway, Oahu	14	May 95	68.0
Launiupoko Shore, Maui	14	May 95	113.0
Power Plant Rd, Guam	14	Aug 95	54.0
Punaluu Highway, Oahu	14	May 95	60.0
Subtotal Sec 14			487.0
Shoreline Protection			
Commercial Port Rd,CNMI	103	Apr 96	280.0
Subtotal Sec 103			280.0
Navigation			
Kahului SBH, Maui	107	Jul 95	503.0
Kahului Hbr Modif, Maui	107	Sep 97	39.0
Subtotal Sec 107			542.0
Flood Control			
Kahawainui Strm, Oahu	205	Apr 95	6.0
Kawainui Marsh, Oahu	205	Aug 94	899.0
Palai Stream, Hawaii	205	Sep 97	4.0
Puna Area, Hawaii	205	Sep 97	13.0
Waiakea Strm, Hawaii	205	Sep 97	11.0
Wailele Strm, Oahu	205	Apr 98	65.0
Subtotal Sec 205			998.0
Grand Total			2,307.0

Mr. MYERS. Thank you, Mr. Bevill.

We have a number of questions here, General, from Mr. Abercrombie, who has another question, and each of us has some other questions we will provide for the record. Keep Charlie and David working now, if you can.

General MILLER. Sir, that is not hard to do.

Mr. MYERS. I know it. Thank you very much for your testimony.

[The information follows:]

KIKIAOLA SMALL BOAT HARBOR

Mr. MYERS. The budget indicates that the General Design Memorandum and final EIS for the Kikiaola Small Boat Harbor, Hawaii, project were approved in September of 1981. Why didn't the project proceed to construction following those approvals?

General MILLER. The State of Hawaii requested that we place the project on hold until cost sharing issues could be resolved. Upon enactment of the Water Resources Development Act of 1986, the State of Hawaii listed the project as its 3rd priority small boat harbor after Maalaea and Kawaihae harbors.

CONTINUING AUTHORITIES PROGRAM

Mr. MYERS. What work do you have underway this year and planned for fiscal year 1996 under the various continuing authorities programs?

General MILLER. We currently have a total of 19 active Continuing Authorities Program projects underway in FY 1995 and planned for continuation into FY 1996. The projects consists of 8 under Section 14 Emergency Protection, 1 under Section 103 Shoreline Protection, 2 under Section 107 Navigation, 6 under Section 205 Flood Control, and 2 under Section 1135 Environmental Restoration.

KAWAIHAE SMALL BOAT HARBOR

Mr. MYERS. What is the status of the Kawaihae Small Boat Harbor, Hawaii, project?

General MILLER. Construction award of the project has been held in abeyance pending resolution of economic concerns regarding the commercial and/or recreational use of the harbor. In addition, the State of Hawaii is faced with a $250 million deficit and is currently reevaluating its financial capability to cost share this $9 million project. As a result, the project was not included in our FY 1996 budget request.

KAWAIHAE SMALL BOAT HARBOR

Mr. MYERS. Was the project cooperation agreement executed last June as scheduled?

General MILLER. No, sir, execution of the project cooperation agreement was delayed in order to revise the General Reevaluation Report and to resolve economic concerns regarding the commercial and/or recreational use of the harbor. Execution of the project cooperation agreement has been held in abeyance until the economic concerns are resolved and the State of Hawaii has reviewed their capability to cost share.

Mr. MYERS. Please describe the economic concerns that exist for the Kawaihae Small Boat Harbor, Hawaii, project?

General MILLER. The primary economic concern is the recreational and commercial composition of the benefits generated by the project. Additional economic analyses are currently being conducted to determine if there are sufficient commercial navigation and storm damage reduction benefits. In order to be classified as a commercial harbor and thus, qualify for the 80 percent federal and 20 percent non-federal cost sharing split, commercial navigation and storm damage reduction benefits must exceed 50 percent of the total benefits. If commercial and storm damage reduction benefits are less than 50 percent, the project will be considered as recreational and the cost sharing changes to 50/50. This will raise the non-federal cost share beyond the funding capability of the sponsor.

FLOOD CONTROL POLICY

Mr. MYERS. Does the proposed policy requiring flood control projects to be multi-state to be eligible for Federal assistance apply to projects in Hawaii?

General MILLER. Yes, sir. The proposed policy requiring that more than half of the damaging flood water come from another state applies to projects in Hawaii and also the Commonwealth of the Northern Mariana Islands, and the Territories of Guam and American Samoa.

UNOBLIGATED CARRYOVER

Mr. MYERS. Both of the construction projects described in the justification documents will be financed in fiscal year 1996 with unobligated carryover funds. Why have you had such a problem meeting with schedules that have been previously submitted to Congress?

General MILLER. In general, we were overly optimistic with regard to schedules and our own capabilities, as well as the sponsors capabilities, to complete critical milestones such as land acquisitions, permit approvals and in resolving critical issues.

For the Alenaio Stream Flood Control project, unforeseen delays were incurred by the local sponsor in acquiring the required real estate for the project. A construction contract was awarded in November 1994.

For the Maalaea Harbor project, a multitude of concerns expressed by Federal and non-Federal agencies, as well as special interest groups, on the draft and final supplemental environmental impact statements have created delays and required additional effort by the Pacific Ocean Division and the local sponsor to address these concerns.

MAALAEA SMALL BOAT HARBOR

Mr. MYERS. Could you please provide us with more detail regarding the issues that need to be resolved before construction of the Maalaea Harbor, Hawaii, project can begin?

General MILLER. The U.S. Fish and Wildlife Service has expressed concerns with potential impacts on the coral reef in the area of the south breakwater extension and the new entrance channel. The Office of State Planning also echoed these concerns with regard to the coral reef and has noted other concerns regarding impacts to recreational surfing, water quality, and threatened/endangered species such as the humpback whale, the Hawaiian green sea turtle, and the hawksbill turtle. The Pacific Ocean Division has subsequently undertaken design refinements to minimize the impacts to the coral reef and surf breaks and is negotiating a mitigation protocol with the State. The National Marine Fisheries Service has issued a no jeopardy opinion for the whales and turtles.

In addition, because the State of Hawaii is faced with a $250 million projected budget deficit, the State is currently reviewing their financial capability to cost share the project construction.

IAO STREAM

Mr. MYERS. Your request includes funds for model testing at the Waterways Experiment Station. Please describe that work and explain why it is necessary.

General MILLER. The funds requested for model testing are for the Iao Stream project on the island of Maui. Our modification of a completed project study at Iao Stream addressed erosion problems occurring at the project's levee toes. Concrete channel lining was identified as an economically feasible solution. Due to the steepness of Iao Stream, the attendant high flow velocities, the high level of development adjacent to the project and the potential for loss of life in the event of structure failure, the channel design will require verification and optimization through hydraulic model testing.

Mr. MYERS. What work will be performed at the Iao Stream, Hawaii, project in fiscal year 1996?

General MILLER. FY 1996 funds are being requested to initiate the preparation of a general design memorandum which will include the formulation of alternatives to address the levee erosion problem, the analysis of economic and environmental impacts, and the initiation of the hydraulic model testing.

QUESTIONS FOR THE RECORD FROM MR. ABERCROMBIE

DISASTER ASSISTANCE

Question. What impact does providing disaster assistance have on your Civil Works execution?

Answer. If a disaster occurs and we are called on to respond, we will do so. Disaster response may impact our Civil Works execution depending on the magnitude of the disaster and the response required. However, we are fortunate to have a relatively large military funded workforce and can be flexible enough to utilize our manpower in this area to minimize the impact on our modest Civil Works program.

Mr. MYERS. The committee will stand adjourned until 2:00 this afternoon.

THURSDAY, FEBRUARY 23, 1995.

SOUTH PACIFIC DIVISION

WITNESSES

BRIGADIER GENERAL BRUCE K. SCOTT, DIVISION COMMANDER
EDWARD J. O'NEILL, DEPUTY DIRECTOR, PROGRAMS MANAGEMENT DIRECTORATE
LAWRENCE L. FELBER, CHIEF, CIVIL WORKS PROGRAMS MANAGEMENT DIVISION

Mr. MYERS. The committee will come to order.

We are pleased this afternoon to have the South Pacific Division, General Scott, before us today.

Your prepared statement will be in the record, and then you may summarize if you care to and proceed as you wish. We are glad to have you all here.

INTRODUCTION

General SCOTT. Mr. Chairman, distinguished Members of the committee, I am pleased to have this opportunity to report to you today on the status of the civil works program in the South Pacific Division. Assisting me today are Mr. Ed O'Neill. He is the Deputy Director of Programs Management. And Mr. Larry Felber, the Chief of the Civil Works Programs Management.

CALIFORNIA FLOODING

Before I address the budget, I would like to take a few moments to discuss the January floods in the State of California. We experienced widespread flooding from storms that continued in some areas for as many as 27 consecutive days, tragically causing at least 10 deaths and estimated damages in excess of $1.3 billion.

Thirty-eight of the State's 58 counties were declared disaster areas by the President. However, the Corps flood control projects in the state functioned as designed and prevented an estimated $430 million in additional damages.

As we have in the past, we responded as requested after State and local resources had been committed. We received emergency FEMA mission assignments in the amount of $13.9 million. We have a close working relationship with FEMA and the State office of emergency services. We intend to continue this outstanding relationship.

SPD AREA OVERVIEW

Now let me turn to my division area. The South Pacific Division encompasses more than one-half million square miles of the beautiful Southwest, including all or parts of eight of the Nation's larger States. The topography and climate are diverse, ranging from the

Continental Divide in the Rocky Mountains of Colorado and Wyoming, through the deserts, canyons and mountains of Nevada, Arizona, Utah and Idaho, through the rich fertile valley farmlands of California and Oregon, and culminating in the dramatic shoreline of the California coast.

POPULATION GROWTH

Drawn by the beauty and the attractive climate of the area, people continue to move West, leading to a sustained population explosion, which together with land use changes have placed severe strains on the region's water resource infrastructure, intensifying flood problems and dramatically escalating the need for adequate supplies of high quality water.

Population in the division area has increased by about 67 percent since 1970, to nearly 40 million people living in 67 congressional districts.

NAVIGATION IMPROVEMENTS

Increased growth has also led to increased commerce. Trade is expanding with other Pacific Rim nations through California's ports. Los Angeles and Long Beach harbors continue to generate the highest customs revenues in the Nation as this trade grows. Increased shipping via the very cost-effective land and rail bridge is driving California's ports to modernize their facilities and enlarge their navigation harbors to accommodate even larger vessels.

ACCOMPLISHMENTS

Flood control and navigation improvements are critical to the wise development and management of our region's water resource infrastructure. This year, we will initiate nine reconnaissance studies, three design projects, and two construction projects. Additionally, we will complete 20 reconnaissance studies, two feasibility studies, three design projects, and two construction projects.

We are extremely proud of our execution of one of the largest civil works programs in the Corps of Engineers. Last year we executed about 85 percent of our total program, the best execution rate in the Corps.

FISCAL YEAR 1996 REQUEST

Our fiscal year 1996 request includes $246.3 million for 122 civil works projects and studies. Adding programmed carryover funds of only $21 million, our total program is $267.2 million.

GENERAL INVESTIGATIONS

For the General Investigations Program, the budget request includes $17.9 million for 52 studies and projects. With these funds, we will initiate two reconnaissance studies and two design projects. All four of these are for the improvement of commercial navigation. We will also complete 10 reconnaissance studies, eight feasibility studies, and eight design projects.

I will now briefly describe a few of these activities, including those budgeted as new starts.

SAN FRANCISCO BAY BAR CHANNEL

One of the new study starts, the existing 55-foot-deep San Francisco Bay entrance channel, is located in the Pacific Ocean about five miles west of the Golden Gate Bridge. Increases in vessel sizes have demonstrated a need for evaluating channel deepening for improving the efficient movement of waterborne commerce within the region.

SOUTHAMPTON SHOAL CHANNEL

The other new study start, the Southampton Shoal Channel, is located in San Francisco Bay about six miles north of the city. This 45-foot-deep channel provides access to Richmond Harbor and nearby petroleum facilities. The channel may need some modification to efficiently and safely accommodate newer commercial tanker ship designs.

CRESCENT CITY HARBOR

Turning to our design program, one of the new starts, the Crescent City Harbor project, is located 290 miles north of San Francisco. This harbor provides a home port and sanctuary for a commercial fishing fleet of about 200 vessels and a Coast Guard search and rescue patrol. The project includes deepening the access channel to the harbor's commercial loading facilities to a depth of about 14 feet.

PORT OF LONG BEACH

Our other new design project is the Port of Long Beach. Annual commerce through the Port of Long Beach currently exceeds 52 million tons, accounting for nearly 30 percent of California's waterborne trade. A feasibility study of deepening the Long Beach Harbor to a depth of about 75 feet is scheduled to be completed in January of 1996.

AMERICAN RIVER WATERSHED

Our single largest request for design funds is for the American River Watershed in California, where we are asking for $3 million to continue review of the locally designed levee improvements at Natomas and the inspection of local construction of this feature.

We also will complete the Supplemental Information Report reevaluating the findings of the American River Feasibility Study and complete documentation for the flood management plan.

CONSTRUCTION, GENERAL

Turning now to our Construction, General Program, the request includes $153.8 million, when combined with programmed carryover funds, provides $174.7 million to initiate one new construction start, continue work on 19 projects, and complete construction of six others. I will briefly discuss some of our planned activities.

LOS ANGELES HARBOR

Los Angeles Harbor is one of our new construction starts. We will prepare and execute a project cooperation agreement in fiscal year 1996. This project consists of four increments of dredging to deepen the entrance channel and provide new channels to existing and new port facilities. The dredged material will be used to create a new landfill pier and a shallow water habitat both within the harbor and along the coast. The estimated project cost is $401 million, of which $300 million will be non-Federal cost.

CONSTRUCTION COMPLETIONS

Completion funds are requested for six projects under construction, including environmental wetlands restoration and demonstration projects at Yolo Basin Wetlands and Sonoma Baylands.

In addition, we will complete the navigation project at Morro Bay Harbor, and flood control projects at Holbrook, Arizona, Wildcat and San Pablo Creeks and Sacramento Urban Area Levees Reconstruction.

SANTA ANA RIVER MAINSTEM

Our largest ongoing construction project is the Santa Ana River Mainstem Project in Southern California. I am certain the Committee is aware of the recent chapter nine bankruptcy filing by Orange County. Our project sponsor is the Orange County Flood Control District. It is a separate entity and remains able and willing to meet the requirements of local cooperation for construction of the Seven Oaks Dam and the Lower Santa Ana River channel improvements.

The request includes $70.2 million to be combined with an additional $2.4 million in programmed carryover funds to continue construction of the Seven Oaks Dam and downstream channel improvements on the Lower Santa Ana River.

RILLITO RIVER

In Arizona, construction is underway on the Rillito River to provide flood protection in the Tucson area. We are requesting $4.9 million, to be combined with programmed carryover of $4 million, to continue this important flood control project.

TROPICANA AND FLAMINGO WASHES, NEVADA

Funds in the amount of $4 million are requested in addition to $4.2 million in programmed carryover to continue construction of the Tropicana and Flamingo Washes project in Las Vegas, Nevada. The project consists of debris basins, detention basins and connecting channels to provide flood protection to this very rapidly growing Las Vegas area.

OAKLAND HARBOR

Returning to Northern California, the program includes $15.9 million, including $1.9 million in programmed carryover, to continue deepening the Oakland Harbor project to a depth of 42 feet. The construction contract was awarded this past December.

OPERATIONS AND MAINTENANCE

The Operations and Maintenance Program contains $74.6 million for 24 navigation projects, and 20 flood control projects. The request is adequate to provide for the annual needs of the Division area.

CONCLUSION

Mr. Chairman, this concludes my presentation, and I stand by ready to answer any questions you may have.

Thank you, sir.

[The statement of General Scott follows:]

US Army Corps
of Engineers
(415)705-1414

BRIGADIER GENERAL
BRUCE K. SCOTT

Commander and Division Engineer
South Pacific Division
U.S. Army Corps of Engineers

Brigadier General Bruce K. Scott became Commanding General and Division Engineer of the South Pacific Division on 28 October 1994. General Scott's previous assignment was as Executive Assistant to the Vice Chairman of the Joint Chiefs of Staff, Washington, DC.

As Commander of the South Pacific Division, General Scott directs the Corps' military construction program in California, Arizona, Nevada, and Utah and manages Corps water resource development programs in those states and adjoining portions of Oregon, Idaho, Wyoming and Colorado. His Division also oversees environmental cleanup activities as part of the Superfund and Defense Environmental Restoration Programs.

General Scott is a 1972 graduate of the United States Military Academy at West Point. As an Olmsted scholar, he received a Master of International Relations equivalent from the Universitaet Freiburg, FRG. He also holds a Master in Public Administration from Harvard University. His military education includes the Engineer Officer Basic and Advance Courses, Command and General Staff College, and the Army War College.

Early assignments include platoon leader, 4th Engineer Battalion, 4th Infantry Division, Ft. Carson, Colorado; Company Commander and Operations Officer, 237th Engineer Battalion, Heilbronn, Germany; and Plans Officer, 7th Engineer Brigade. General Scott later served as Executive Officer of the 54th Engineer Battalion, Wildflecken, Germany and Commander 16th Engineer Battalion, 1st Armored Division, Fuerth, Germany; and Commander, Divisional Engineer Brigade, 1st Armored Division.

Other assignments include serving as a White House Fellow as Special Assistant to the Secretary of Transportation, Elizabeth Dole; Military Assistant to the Executive Secretary for the Secretary of Defense, and Aide-de-Camp/Executive Assistant to the Commanding General, V Corps, United States Army Europe and Seventh Army.

Among his military decorations are the Defense Superior Service Medal with Oak Leaf Cluster; Legion of Merit with Oak Leaf Cluster; Defense Meritorious Service Medal; Meritorious Service Medal with Oak Leaf Cluster; Army Commendation Medal, Army Achievement Medal; Bundeswehr Cross of Honor; Parachutist Badge; Ranger Tab; and the Offices of the Secretary of Defense and Joint Chiefs of Staff Identification Badge.

A native of El Paso, Texas, General Scott is married to the former Mary B. Tallman. They have six children: Kate, Andy, Karoline, Kerney, Alec, and Adam.

JANUARY 1995

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
SOUTH PACIFIC DIVISION

STATUS REPORT OF CIVIL WORKS ACTIVITIES IN THE SOUTH PACIFIC DIVISION

BRIGADIER GENERAL BRUCE K. SCOTT
DIVISION COMMANDER

ACCOMPANIED BY:

EDWARD J. O'NEILL
DEPUTY DIRECTOR, PROGRAMS MANAGEMENT DIRECTORATE

LAWRENCE L. FELBER
CHIEF, CIVIL WORKS PROGRAMS MANAGEMENT DIVISION

23 FEBRUARY 1995

23 FEBRUARY 1995

STATUS REPORT OF CIVIL WORKS ACTIVITIES IN THE SOUTH PACIFIC DIVISION FISCAL YEAR 1996

BRIGADIER GENERAL BRUCE K. SCOTT, DIVISION COMMANDER
EDWARD J. O'NEILL, DEPUTY DIRECTOR, PROGRAMS MANAGEMENT DIRECTORATE
LAWRENCE L. FELBER, CHIEF, CIVIL WORKS PROGRAMS MANAGEMENT DIVISION

Introduction

Mr. Chairman, distinguished Members of the Committee, I am pleased to have this opportunity to report to you on the status of Civil Works activities of the South Pacific Division.

Assisting me are Mr. Ed O'Neill, Deputy Director of Programs Management and Mr. Larry Felber, Chief of Civil Works Programs Management.

California Flooding

Before I address the Budget, I'd like to take a few moments to discuss the January floods in the State of California. We experienced widespread flooding from the storms that continued in some areas for as many as 27 consecutive days, tragically causing at least 10 deaths and latest estimated damages in excess of $1.3 billion. Thirty-eight of the State's 58 Counties were declared disaster areas by the President. However, Corps flood control projects in the state functioned as designed and prevented an estimated additional $430 million in damages.

As we have in the past, we responded as requested after local and state resources had been committed. We received FEMA mission assignments in the amount of $13.9 Million. We have established a close working relationship with the State Office of Emergency Services and FEMA through exercise scenarios and actual natural disaster responses. We intend to continue that excellent relationship.

SPD Area Overview

Now, let me turn to my Division area. The South Pacific Division encompasses more than one-half million square miles of the beautiful Southwest. It includes all..or parts..of eight of the Nation's larger States. The topography and climate are diverse, ranging from the Continental Divide in the Rocky Mountains of Colorado and Wyoming, through the deserts, canyons and mountains of Nevada, Arizona, Utah and Idaho, through the rich fertile valley farmlands of California and Oregon...to the dramatic shorelines of the California coast.

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Construction Completions

Completion funds are requested for six projects under Construction, including Environmental Wetlands Restoration and Demonstration projects at Yolo Basin Wetlands and Sonoma Baylands. In addition, we will complete the navigation project at Morro Bay Harbor, and flood control projects at Holbrook, Arizona, Wildcat and San Pablo Creeks and Sacramento Urban Area Levees Reconstruction.

Santa Ana River Mainstem

Our largest on-going Construction project is the Santa Ana River Mainstem project in Southern California. I'm certain the Committee is aware of the recent Chapter Nine Bankruptcy Filing by Orange County. However, our project sponsor, the Orange County Flood Control District, is a separate entity. That District remains able and willing to meet the requirements of local cooperation for construction of the Seven Oaks Dam and the Lower Santa Ana River channel improvements. The request includes $70.2 million, to be combined with an additional $2.4 Million in programmed carryover funds, to continue construction of the Seven Oaks Dam and downstream channel improvements on the Lower Santa Ana River.

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Returning to Northern California, the program includes $15.9 million, including $1.9 million programmed carryover funds, to continue deepening the Oakland Harbor project to 42 feet. The construction contract was awarded this past December.

Operations and Maintenance

The Operations and Maintenance Program contains $74.6 million for 24 Navigation projects... And 20 Flood Control projects. The request is adequate to provide for the annual needs of the Division area.

Conclusion

Mr. Chairman, that concludes my presentation and I stand ready to answer any questions you may have, sir.

[CLERK'S NOTE.—The justification sheets for the South Pacific Division follow:]

JUSTIFICATION OF ESTIMATES FOR CIVIL FUNCTIONS ACTIVITIES
DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS
FISCAL YEAR 1996

SOUTH PACIFIC DIVISION

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Department of the Army, Corps of Engineers
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SOUTH PACIFIC DIVISION

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Department of the Army, Corps of Engineers
Fiscal Year 1996

SOUTH PACIFIC DIVISION

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SOUTH PACIFIC DIVISION

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Justification of Estimate for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

SUMMARY, SOUTH PACIFIC DIVISION

	FY 1995 Allocation	FY 1996 Request	Increase or Decrease
General Investigations			
Surveys	$ 9,290,000	$ 10,950,000	$ +1,660,000
Preconstruction Engineering and Design	5,959,000	6,906,000	977,000
Subtotal General Investigations	(15,219,000)	(17,856,000)	(+2,637,000)
Construction General			
Construction	152,362,000	174,762,000 1/	+22,400,000
Operations and Maintenance			
Project Operations	24,952,000	30,916,000	+5,964,000
Project Maintenance	48,210,000	43,730,000	-4,480,000
Subtotal Operations and Maintenance	(73,162,000)	(74,646,000)	(+1,484 ,000)
	============	=============	=============
GRAND TOTAL, SOUTH PACIFIC DIVISION	$241,743,000	$267,264,000	$26,521,000

1/ Includes $20,966,000 in unobligated carryover from prior years that is being programmed for use in Fiscal Year 1996.

6 February 1995

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
1. **SURVEYS - NEW:**					

a. Navigation Studies: The amount of $480,000 is rerquested in Fiscal Year 1996 to initiate two navigation reconnaissance studies.

San Francisco Bay Bar Channel	500,000	0	0	240,000	260,000

The study area is located approximately 5 miles west of the Golden Gate Bridge and 3 miles northwest of San Francisco, California.
The 21,000-foot-long, 2,000-foot-wide and 55-foot-deep Bar Channel provides deep-draft vessel access to ports located in San
Francisco Bay. These vessels include deep-draft commercial (foreign and domestic) and military vessels. Initial construction of
the Bar Channel to a depth of 50 feet was completed in 1959. In 1974 the channel was deepened to 55 feet as authorized by the
Rivers and Harbors Act of 1965. In 1992, approximately 9,100 commercial vessels traversed the Bar Channel, carrying a total of
over 67 million short tons of cargo either to or from interior ports. This traffic is expected to increase in both magnitude and
the size of vessels used. The reconnaissance study will investigate the feasibility of further Bar Channel deepening beyond the
authorized depth of 55 feet, in response to changes in deep-draft vessel operations and present and future use of deeper design
draft vessels in the San Francisco Bay region. Vessel traffic benefitting from these drafts are large oil tankers serving San
Francisco Bay Area refineries, located in Contra Costa County. Deepening of the bar channel would reduce light loading of large
tankers calling at San Francisco Bay, thus improving efficiency and taking advantage of economies of scale. This study is
important in maintaining the efficient movement of water borne commerce within the region. The Contra Costa County Community
Development Department, the local sponsor, expressed support for the study in May 1994, understands the two-phase planning
process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The funds requested for Fiscal Year
1996 will be used to initiate the reconnaissance phase of the study at full Federal expense. The reconnaissance study is
scheduled to be completed in March 1997, which is 12 months after initiating the study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - NEW - NAVIGATION					
Southampton Shoal Channel	500,000	0	0	240,000	260,000

The study area is located in San Francisco Bay approximately 6 miles north of San Francisco, California between Angel Island and Richmond Harbor. The channel provides deep draft navigation access to Richmond Harbor and the Chevron Longwharf. In 1992, 21 million tons of commercial cargo passed through the channel with both foreign and domestic shipping vessels. The Southampton Shoal Channel was constructed by the Corps under the Richmond Outer Harbor project to a depth of 35 feet in 1957 and was subsequently deepened to 45 feet as part of San Francisco Bay to Stockton project in 1985. The reconnaissance study will evaluate the existing Federal channel and determine if modifications are necessary to maintain a safe navigable approach for tanker vessels drafting up to 45 feet and 1,100 feet in length, and averaging 150,000 tons. Recent information indicates the channel may need modifications to efficiently and safely accommodate newer commercial tanker ship designs. In January 1994, one of the largest crude oil shippers in the Bay Area stated that they were restricting the draft of inbound tankers to 39 feet, due to strong lateral currents and high spots adjacent to the channel. This condition represents nearly 10 percent loss in productive vessels draft, and has heightened safety concerns over potential grounding and severe environmental damage from a major oil spill in Central San Francisco Bay. The tankers presently using the channel routinely carry 80 - 100,000 barrels of crude oil. The sponsor has requested a study to redesign the channel to minimize vessel restrictions and delays, and reduce the threat of grounding. The Contra Costa County Community Development Department, the local sponsor, expressed support for the study in May 1994, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The funds requested for Fiscal Year 1996 will be used to initiate the reconnaissance phase of study at full Federal expense. The reconnaissance study is scheduled to be completed in April 1997, which is 12 months after initiating the study.

TOTAL NAVIGATION STUDIES	1,000,000	0	0	480,000	520,000

b. Flood Damage Prevention Studies: None

c. Shoreline Protection Studies: None

d. Special Studies: None

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
e. Project Review Studies: None					
TOTAL SURVEYS - NEW	1,000,000	0	0	480,000	520,000

2. SURVEYS - CONTINUING

a. Navigation Studies: The amount of $1,475,000 is requested to continue six studies and complete one study in Fiscal Year 1996.

California					
Crescent City Harbor	500,000	118,000	132,000	250,000	0

The study area is located 290 miles north of San Francisco, California and 17 miles south of the Oregon border. The harbor provides a home port and sanctuary for a west coast commercial fishing fleet consisting of 200 fishing vessels and the Coast Guard Search, Rescue and Fishing Patrol. The 5-year average annual commercial fish catch for the years 1985 thru 1990 is over 15,000 tons, valued at $13 million per year. Sand accretion in the inner harbor area has restricted access for commercial fishing vessels from the inner harbor to the loading facilities and fish boat basin mooring area. Studies under the Section 107 Continuing Authorities Program were recently terminated when it became apparent the proposed improvements, which were determined economically feasible, duplicated previously authorized but unconstructed project improvements. The reconnaissance study will examine the feasibility of deepening the access channel from the inner harbor to the fish boat basin and the loading facilities. The Crescent City Harbor District, the local sponsor, expressed support for the study in December 1994, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. A Feasibility Cost Sharing Agreement is scheduled to be signed in July 1995.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase of the study at full Federal expense, and if the reconnaissance report is certified to be in accord with policy, to continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to complete the feasibility study. The preliminary estimated cost of the feasibility phase is $600,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

NAVIGATION - Crescent City Harbor (Cont'd)

Total Estimated Study Cost	$800,000
Reconnaissance Phase (Federal)	200,000
Feasibility Phase (Federal)	300,000
Feasibility Phase (Non-Federal)	300,000

The reconnaissance phase is scheduled for completion in July 1995. The feasibility study is scheduled for completion in August 1996.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - NAVIGATION					
Marina del Rey and Ballona Creek	875,000	138,000	178,000	200,000	359,000

Marina del Rey is located in Los Angeles County, California,.about 20 miles southwest of the city of Los Angeles. The existing Federal navigation project for Marina del Rey, formerly Playa del Rey Inlet and Harbor, consists of two jetties and navigation channels ranging from 15 to 20 feet in depth and a depth of 12 feet in the interior channels. Marina del Rey is home port to about 15 commercial fishing boats and is used by 50 other transit boats with a total fish catch of nearly 10 million pounds valued at approximately $10 million. There are also about ten charter boat operations and five tour boat operations that are used by over 100,000 people each year. The harbor contains over 6,000 berths, primarily servicing recreational craft in the harbor. An offshore breakwater was added to the Federal project in 1963. The Corps has performed periodic maintenance dredging to maintain channel depths. Shoaling of the navigation channels is caused by the littoral movement of sediment along the coast as well as material transported out of the Ballona Creek flood control channel. Disposal of the material from Ballona Creek is complicated due to the nature of the contaminants found in the material. In August 1992, Los Angeles County indicated it is concerned that shoaling and the hazards associated with the contaminated material will impact navigation in the harbor. There is strong support for Federal investigation of harbor modification, as the complications surrounding disposal of the material in the existing navigation channels are impeding formal maintenance responsibilities and may threaten not just existing but future navigational usage of the harbor. The County of Los Angeles, the local sponsor, expressed support for the study in August 1992, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost-Sharing Agreement is scheduled to be signed in January 1996.

Fiscal Year 1995 funds are being used to continue the reconnaissance phase of the study.The funds requested in Fiscal Year 1996 will be used to complete the reconnaissance phase at full Federal expense, and if the reconnaissance report is certified to be in accord with policy, to continue into the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $1,050,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

NAVIGATION - Marina del Rey and Ballona Creek (Cont'd)

Total Estimated Study Cost	$1,400,000
Reconnaissance Phase (Federal)	350,000
Feasibility Phase (Federal)	525,000
Feasibility Phase (Non-Federal)	525,000

The reconnaissance phase is scheduled for completion in January 1996. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - NAVIGATION					
Newport Bay Harbor	990,000	518,000	0	250,000	222,000

The study area is located on the coast of Southern California in Orange County, about 40 miles southeast of Los Angeles. The existing Federal navigation project includes jetties forming the entrance, navigation channels, anchorage areas, and a turning basin. The upper Newport Bay area consists of an 800 acre, shallow tidal basin, much of which is part of a State Ecological Preserve that contains several Federal and State threatened and endangered species. The investigation will examine the Federal interest in the channel improvements and other measures to preserve and restore the valuable wetland areas which are experiencing severe degradation due to reduced tidal flushing and siltation. It is also likely that the siltation from the upper bay area will move into Federal channels as a result of floods, which could require costly emergency maintenance dredging. The City of Newport Beach has completed channel work to restore some tidal flushing to the upper bay, but this work is not considered to be a complete or permanent solution. The study is evaluating extending the existing Federal channel into Upper Newport Bay to the existing debris basins and providing additional channels to improve the tidal circulation. Orange County, the City of Newport Beach, U.S. Fish and Wildlife, National Marine Fisheries Service, and California Department of State Fish and Game have all expressed interest in the study and the pursuit of Federal improvements. Orange County, the local sponsor, reaffirmed its support for the study in December 1994, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. However, due to the current financial capability and desires of the local sponsor, the feasibility phase of the study is scheduled to be initiated in Fiscal Year 1996. The Feasibility Cost-Sharing Agreement is now scheduled to be signed in January 1996.

If the reconnaissance report is certified to be in accord with policy, the funds requested for Fiscal Year 1996 will be used to continue into the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $1,100,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind service. A summary cost sharing is as follows:

Total Estimated Study Cost		$1,540,000
Reconnaissance Phase (Federal)	440,000	
Feasibility Phase (Federal)		550,000
Feasibility Phase (Non-Federal)	550,000	

NAVIGATION - Newport Bay Harbor (Cont'd)

The reconnaissance phase is scheduled for completion in January 1996. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - NAVIGATION					
Pillar Point Harbor (Deepening)	875,000	0	175,000	225,000	475,000

The study area is located 20 miles south of San Francisco, California in the northern portion of Halfmoon Bay. The protective harbor is formed with two Federally-constructed rubble-mound breakwaters, the west breakwater 3,670 feet long and the east breakwater 4,420 feet long. The construction of both breakwaters at Halfmoon Bay was completed by the Corps in 1961. Additional construction of a 1,050-foot extension to the west breakwater to alleviate wave surge in the harbor was completed by the Corps in 1967. Water depths within the harbor range from 5 to 20 feet mean lower low water datum. The harbor is used extensively by commercial fishermen as a home port. The average annual commercial fish catch landed at Pillar Point Harbor for the years 1988 through 1992 was over 3,600 tons, valued at $5.5 million per year. The harbor is also the home base for the San Mateo Harbor District Search, Rescue and Fishing Patrol which averages about 100 rescues per year. Over a period of 30 years Pillar Point Harbor has gradually shoaled and available information indicates the shoaling rate has increased in recent years with navigation within the harbor beginning to experience maneuvering difficulties and operational safety hazards. A study is needed to investigate the feasibility of providing increased harbor and entrance depths for improving commerce and navigational safety. The San Mateo County Harbor District, the local sponsor, expressed support for the study in October 1994, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. A Feasibility Cost Sharing Agreement is scheduled to be signed in July 1996.

Fiscal Year 1995 funds are being used to initiate the reconnaissance study. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance study at full Federal expense and, if the reconnaissance report is certified to be in accord with policy, to continue into the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $1,050,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$1,400,000
Reconnaissance Phase (Federal)	350,000
Feasibility Phase (Federal)	525,000
Feasibility Phase (Non-Federal)	525,000

NAVIGATION - Pillar Point Harbor (Deepening) (Cont'd)

The reconnaissance phase is scheduled for completion in July 1996. A completion date is being determined for this feasibility study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - NAVIGATION					
Port Hueneme	1,250,000	500,000	100,000	300,000	350,000

The study area is located about 65 miles northwest of Los Angeles in Ventura County, California. The study will investigate modifications to the Federal deep draft navigation project including deepening the existing channel and turning basin and other navigation improvements required for port expansion. Waterborne commerce through Port Hueneme is estimated to have been over 748,000 tons in 1989, consisting primarily of bulk and roll-on cargo. Larger and deeper draft vessels are beginning to use the port but must be light loaded and wait for adequate berths, due to other port development constraints. The Navy Engineering Facilities, located at Port Hueneme, has also indicated the need for deeper channels to accommodate larger vessels expected to be used in their operations. The Oxnard Harbor District, the local sponsor, expressed support for the study in December 1993, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost-Sharing Agreement is scheduled to be signed in March 1995.

If the reconnaissance report is certified to be in accord with policy, Fiscal Year 1995 funds will be used to continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $1,500,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,000,000
Reconnaissance Phase (Federal)	500,000
Feasibility Phase (Federal)	750,000
Feasibility Phase (Non-Federal)	750,000

The reconnaissance phase is scheduled for completion in March 1995. The feasibility study is scheduled for completion in December 1997.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - NAVIGATION					
San Francisco Bay Leonard Ranch (Disposal)	750,000	300,000	0	150,000	300,000

The study area is located in Sonoma County, approximately 25 miles north of San Francisco, California near the Petaluma River and San Pablo Bay. Leonard Ranch consists of approximately 240 acres of actively farmed land, acquired by the Sonoma Land Trust using funds provided by the California State Coastal Conservancy. The site is reclaimed marsh and baylands which are protected from tidal inundation by dikes located on adjacent property. The San Francisco Bay Region has more than $5.4 billion of annual economic activity that is directly dependent on deep and shallow draft navigation channels. These channels require periodic dredging and disposal operations which often encounter sediments unsuitable for unconfined aquatic disposal. The Corps has a study program underway, the Long Term Management Strategy, to identify future disposal options. Leonard Ranch has been identified as a potential regional rehandling site for dredged material unsuitable for unconfined aquatic disposal. The reconnaissance study is evaluating the technical, economic, and environmental factors and the Federal interest, in use of the site for a rehandling and transfer facility for beneficial uses of dredged material. The California State Coastal Conservancy, the local sponsor, expressed support for the study in June 1994, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. A Feasibility Cost Sharing Agreement is scheduled to be signed in November 1995.

Fiscal Year 1994 funds are being used to initiate and complete the reconnaissance phase of the study at full Federal expense. No funds were budgeted for Fiscal Year 1995. If the reconnaissance report is certified to be in accord with policy, the funds requested for Fiscal Year 1996 will be used to continue into the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $900,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

NAVIGATION - San Francisco Bay Leonard Ranch (Disposal) (Cont'd)

Total Estimated Study Cost	$1,200,000
Reconnaissance Phase (Federal)	300,000
Feasibility Phase (Federal)	450,000
Feasibility Phase (Non-Federal)	450,000

The reconnaissance phase is scheduled for completion in November 1995. A completion date is being determined for this feasibility study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - NAVIGATION					
San Francisco Harbor	1,760,000	385,000	0	100,000	1,275,000

The study area is located in San Francisco Bay, California, in the city of San Francisco, at and near the mouth of Islais Creek, south of Potrero Point. The existing project was authorized in November 1972 and construction was completed in May 1977. The project consists of an entrance channel 500 feet wide and 40 feet deep, an approach channel adjacent to the Army Street Terminal, 35 feet deep, and an approach channel to Piers 94 and 96, 38 feet deep. The channels serve Piers 80, 94 and 96. The Federal channels are being maintained by the Corps of Engineers but require infrequent maintenance. The channels are being used for containerized commercial cargo. In 1990, 1,100,000 metric revenue tons of cargo passed through the study area. In the last several years, larger and deeper containerships, with drafts up to 39 feet, were experiencing difficulties in negotiating the bends in the Federal project. In order to accommodate the larger vessels and assure safe navigation, the Port of San Francisco, in 1987, dredged two new approach channels 500 feet wide and 40 feet deep. These channels are now being used by all vessels. The feasibility study will evaluate the existing Federal channel, and the Port's channel, and determine if modifications are needed to maintain safe approach channels for container ships utilizing piers 80, 94, and 96. The Port of San Francisco, the local sponsor, expressed support for the study in July 1992, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. However, due to the current financial capability and desires of the local sponsor, the feasibility phase of the study is scheduled to be initiated in Fiscal Year 1996. The Feasibility Cost Sharing Agreement is now scheduled to be signed in June 1996.

If the reconnaissance report is certified to be in accord with policy, the funds requested for Fiscal Year 1996 will be used to continue into the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $2,750,000, which is to be shared on a 50-50 basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost-sharing is as follows:

Total Estimated Study Cost	$3,135,000
Reconnaissance Phase (Federal)	385,000
Feasibility Phase (Federal)	1,375,000
Feasibility Phase (Non-Federal)	1,375,000

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NAVIGATION - San Francisco Harbor (Cont'd)					
The reconnaissance phase is scheduled for completion in June 1996. A completion date is being determined for this feasibility study.					
TOTAL NAVIGATION STUDIES	7,000,000	1,959,000	585,000	1,475,000	2,981,000

b. Flood Damage Prevention Studies: The amount of $5,732,000 is requested to continue ten studies and complete eleven studies in Fiscal Year `1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Arizona					
Gila River, Gillespie Dam to Yuma	2,500,000	700,000	500,000	400,000	900,000

The study area consists of a 164-mile reach of the Gila River from Gillespie Dam to Yuma, Arizona, where the Gila River flows into the Colorado River. Gillespie Dam is located about 40 miles southwest of Phoenix in south-central Arizona. Yuma is located on the Colorado River at the confluence with the Gila River in extreme southwestern Arizona, just 15 miles north of the international border with Mexico. Historically, large floodflows have caused extensive damages in the study area. Painted Rock Dam, located about 40 river miles downstream from Gillespie Dam, was constructed by the Corps in 1959 as a flood control structure. Despite the existence of Painted Rock Dam, a number of major storms in the winter and spring of 1993 filled that dam, overflowed the spillway, and caused major damages to agricultural lands, crops, transportation facilities, homes, and infrastructure. Preliminary reports and estimates from local and state officials indicate that as much as $100 million in damages may have occurred in the study area. The study will investigate solutions for flood damage reduction, environmental restoration and protection, and preservation of the existing infrastructure. The Arizona Game and Fish Department has stated an interest in participating in riparian restoration studies. Yuma and Maricopa Counties expressed support for the study in November 1993, understand the two-phase planning process, and are willing to participate in 50-50 cost-sharing of feasibility phase studies. The Feasibility Cost-Sharing Agreement is scheduled to be signed in June 1995.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase of the study at full Federal expense and if the reconnaissance report is certified to be in accord with policy, to continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $3,000,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$4,000,000
Reconnaissance Phase (Federal)	1,000,000
Feasibility Phase (Federal)	1,500,000
Feasibility Phase (Non-Federal)	1,500,000

FLOOD DAMAGE PREVENTION - Gila River, Gillespie Dam to Yuma (Cont'd)

The reconnaissance phase is scheduled for completion in June 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Gila River, North Scottsdale Drainage Area	700,000	0	300,000	400,000	0

The majority of the study area is located in the northeast Phoenix, Arizona metropolitan area, primarily in the city of Scottsdale and is bound on the east by the McDowell Mountains. This investigation, which is specifically addressing the flooding problems of the North Scottsdale Drainage Area, was initially funded as the Gila River, McDowell Mountains study as provided in the Energy and Water Development Appropriations Act, 1995. The watershed affecting the study area eventually drains into the Central Arizona Project Canal to the south. The canal also separates the area into upper and lower watersheds. In the upper watershed, frequent storm events cause damage to several large residential subdivisions and public improvements. As many as 1000 homes, with an average price of more than $200,000, are estimated to be located within the designated high hazard flood zones in the study area. The upper watershed consists primarily of low capacity washes that spread over alluvial fan floodplains. These floodplains are hazardous areas because they have unpredictable floodflow patterns and the natural channels are typically capable of containing only two to five-year flood events. Floodflows have the potential of moving across these fan areas swiftly and impose a threat to life and property. The Federal Emergency Agency has designated a large portion of the remaining undeveloped land as high hazard zones. The study area is experiencing problems with rapid development and expansion in these floodplains. Special restrictions and constraints have been placed on future development in these designated high hazard zones. Flood insurance is also required. There is an urgent need for a floodwater management plan to reduce the flood hazard and the difficulties these conditions impose. The study will evaluate the potential of managing peak flows, reducing inundation damages, integrating flood control with planned land use change and transportation, and maximizing public benefits including environmental, recreational and cultural values.

Fiscal Year 1995 funds are being used to initiate the reconnaissance phase of the study. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase at full Federal expense The reconnaissance phase is scheduled for completion in August 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Gila River, Tortolita Drainage Area	500,000	0	300,000	200,000	0

The study area is located in the northern portion of the Tucson metropolitan area in southern Arizona and includes approximately 27 square miles of watershed. The Tortolita Drainage Area is bounded by Interstate Highway 10 to the west, Canada del Oro Wash to the south, and US Highway 89 to the east. The watershed, which drains into the Santa Cruz River, consists primarily of low capacity washes that spread over alluvial fan flood plains. These flood plains are hazardous areas since they have unpredictable floodflow patterns, and the natural channels are typically capable of containing only two to five-year flood events. Floodflows have the potential for moving across the alluvial fan areas swiftly, and they impose a threat to life and property. Rapid growth and development is occurring in the study area and is encroaching upon the limited capacity of the area's natural drainage channels. A flood water management plan is needed that will control peak flows, partially or completely remove the alluvial fan flooding hazard, utilize and retain as much of the existing environment as possible, and effectively integrate with the existing infrastructure. The study will address the feasibility of providing structural and nonstructural solutions to alleviate the flooding problem. Studies will concentrate on evaluating measures to reduce flood damages during seasonal storms.

Fiscal Year 1995 funds are being used to initiate the reconnaissance phase of the study. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase at full Federal expense. The reconnaissance phase is scheduled for completion in July 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Rio Salado, Salt River	1,875,000	403,000	447,000	300,000	725,000

The study area is located along a 30-mile reach of the Salt River that passes through the cities of Tempe and Phoenix, Arizona. Rio Salado, which is under study by local interests, is included in the development of a land-use management plan in conjunction with water resources development. This study, together with local effort, is addressing restoration of riparian habitat, in conjunction with flood control, water quality and recreation purposes. Opportunities have been identified for constructed wetlands which could restore riparian habitat, including that of the Yuma Clapperail, an endangered bird species, and improve water quality. The Arizona Game and Fish Department has stated an interest in participating in riparian restoration studies. The Cities of Tempe and Phoenix expressed support for the study in May 1994, understand the two-phase planning process, and are willing to participate in 50-50 cost-sharing of feasibility phase studies. The Feasibility Cost-Sharing Agreement is scheduled to be signed in July 1995.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase of the study at full Federal expense and if the reconnaissance report is certified to be accord with policy, to continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase. The preliminary estimated cost of the feasibility phase is $2,250,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,000,000
Reconnaissance Phase (Federal)	750,000
Feasibility Phase (Federal)	1,125,000
Feasibility Phase (Non-Federal)	1,125,000

The reconnaissance phase is scheduled for completion in July 1995. A completion date is being determined for this feasibility study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Tucson Drainage Area	1,750,000	1,225,000	345,000	180,000	0

The study includes investigation of flood problems on streams that flow within the city of Tucson, the second largest city in Arizona, located in eastern Pima County. Increased urbanization has changed the characteristics of runoff conditions and has left the existing systems for this region inadequate. Floods on many of the streams flowing into the Santa Cruz River have caused serious damage annually to urban properties, highways and bridges. Erosion and deposition of debris have also resulted from extensive flooding. In May 1985, the Corps of Engineers completed a Tucson Urban Study which focused on flood problems in the greater Tucson area, but not on the city itself. The report recommended that no further studies be undertaken as they were not warranted at that time. A major flood in October 1983 caused $50 million in flood damages, $64.5 million at current prices. Extensive damages were recorded throughout the urban and agricultural areas. Critical data from the devastating flood of October 1983 were not included in the Corps' study. The Federal Emergency Management Agency reevaluated the flooding conditions and indicated that because of changed conditions in the study area, the floodplains on the major drainage systems in the city have increased significantly in size. The 1990 Flood Insurance Study maps identify significant flooding problems in several areas, including the Tucson Arroyo and Arroyo Chico Wash, which drain central and downtown Tucson. Over 1,000 additional acres of urban area along more than 10 miles of the major washes lie in the 100-year floodplain today. An urgent need exists to develop a comprehensive water resource plan to assure future flood damage prevention. The reconnaissance study findings indicate a flood control system of three detention basins in the Arroyo Chico Wash watershed and rehabilitation of the 65-year- old Tucson Arroyo are feasible. Pima County Flood Control District, the local sponsor, signed the Feasibility Cost Sharing Agreement in July 1992.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to complete the feasibility study. The preliminary estimated cost of the feasibility phase is $2,500,000, which is to be shared on a 50-50 basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

FLOOD DAMAGE PREVENTION - Tucson Drainage Area (Cont'd)

Total Estimated Study Cost	$3,000,000
Reconnaissance Phase (Federal)	500,000
Feasibility Phase (Federal)	1,250,000
Feasibility Phase (Non-Federal)	1,250,000

The reconnaissance phase was completed in July 1992. The feasibility study is scheduled for completion in October 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
California					
Northern California Streams Cache Creek Environmental Restoration	500,000	0	300,000	200,000	0

The Cache Creek basin is located about 15 miles northwest of Sacramento, California and contains about 1,150 square miles of drainage area. The Cache Creek riparian corridor is a 30 mile reach of lower Cache Creek from the town of Capay to the Cache Creek Settling Basin. The riparian corridor has been severely degraded as a result of multiple activities and developments along the creek including flood control works, recreation, water supply, and gravel mining. In addition, upstream water-related projects have changed hydrologic conditions along Cache Creek and have significantly reduced the wildlife habitat within the area. Local interests strongly support developing an environmental restoration plan to preserve and restore wildlife resources and vegetation along the Cache Creek corridor. Potential restoration measures include gravel pit restoration, wetland creation within the settling basin, and creekside riparian plantings. The gravel pit proposal would involve construction of gates, canals and small detention structures at abandoned gravel sites. Water would be diverted into the restored sites thereby creating seasonal and permanent wetlands and riparian areas.

Fiscal Year 1995 funds are being used to initiate the reconnaissance phase of the study at full Federal expense. Funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase. The reconnaissance phase is scheduled for completion in February 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Northern California Streams, Sacramento River Fish Migration	1,500,000	210,000	410,000	300,000	580,000

The study area is located in northern California and includes the mainstem of the Sacramento River downstream from Sacramento, the Sacramento River Deep Water Ship Channel, and most of the Sacramento-San Joaquin Delta. The area under study includes about 450 square miles. The Sacramento Deep Water Ship Channel (30 foot depth), which extends from Collinsville to Sacramento, was constructed and completed by the Corps in 1963 for the improvement of commercial navigation. The current Sacramento River Deep Water Ship Channel project is deepening the existing channel to 35 feet. The salmon runs in the Sacramento River have declined substantially in recent years. More than 70 percent of all salmon caught off the coast of California come from the Sacramento River system. There are four separate runs (spring, fall, late fall, winter) with each run experiencing severe declines in the past 20 years. The winter-run salmon, in particular, has declined nearly 98 percent and is currently listed as endangered under both Federal and State laws. The Sacramento River Fish Migration study will investigate alternatives for improving fish migration through the Sacramento-San Joaquin Delta through utilization of the manmade navigation channel as a supplemental route for anadromous fish migration including fish passage improvements at William G. Stone Lock. Other alternative routes will also be investigated. These alternative migration routes would bypass Delta channels and agricultural diversions along the Sacramento River and sloughs thereby potentially decreasing fish mortality. Potential projects must be compatible with navigation purposes and may include channel diversion structures, flow regime modifications, sound barriers, or reoperation of the lock. The State of California, the local sponsor, expressed support for the study in January 1994, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost Sharing Agreement is scheduled to be signed in June 1995.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase of the study at full Federal expense, and if the reconnaissance report is certified to be in accord with policy, continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The estimated cost of the feasibility phase is $1,800,000 to be cost shared on a 50-50 basis by Federal and non-Federal interests. Up to one half of the non-Federal share will be in-kind services. A summary of study cost sharing is as follows:

FLOOD DAMAGE PREVENTION - Northern California Streams, Sacramento River Fish Migration (Cont'd)

Total Estimated Study Cost	$2,400,000
Reconnaissance Phase (Federal)	600,000
Feasibility Phase (Federal)	900,000
Feasibility Phase (Non-Federal)	900,000

The reconnaissance phase is scheduled for completion in June 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Northern California Streams, Winters and Vicinity	1,250,000	160,000	350,000	200,000	540,000

The study area is in southwestern Yolo County approximately 30 miles west of Sacramento, California. The city of Winters is located along Putah Creek and Dry Creek and is bordered to the north by Moody Slough and Chickahominy Slough. Winters, population 5,000, floods every two to five years due primarily to inadequate flow capacity of Moody Slough. Construction improvements of County Road 89 and Interstate Highway 505 have increased flooding problems in the area and have subjected portions of Winters to flooding by preventing naturally occurring drainage to the east of Winters. Flooding has also occurred from Dry Creek, Putah Creek, Chickahominy Slough and multiple local canals. The 1980 flood covered more than 12,000 acres and flooding during extended rainstorms has caused damage to structures, streets and roads, agricultural land, equipment and crops. The area to the northeast of Winters is susceptible to significant damage as development occurs in areas designated for light and heavy industrial uses. Potential projects include detention basins combined with diversion channels, realignment of canals and non-structural measures including floodproofing and raising of structures. The City of Winters, the local sponsor, expressed support for the study in January 1994, understands the two-phase planning process and is willing to consider participating in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost Sharing Agreement is scheduled to be signed in July 1995.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase at full Federal expense, and if the reconnaissance report is certified to be in accord with policy, continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $1,500,000 which is to be shared on a 50-50 basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,000,000
Reconnaissance Phase (Federal)	500,000
Feasibility Phase (Federal)	750,000
Feasibility Phase (Non-Federal)	750,000

The reconnaissance phase is scheduled for completion in July 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Northern California Streams, Yuba River Basin	1,570,000	1,216,000	254,000	100,000	0

The study area is located between the Feather and American River Basins in northern California, primarily in Sutter and Yuba Counties approximately 50 miles north of Sacramento. The principal urban centers within the study area include Marysville and Yuba City with current populations of 12,800 and 33,600, respectively. The Marysville and Yuba City area has experienced six major floods which include the floods of November 1950, December 1955 and December 1964 through January 1965 which were the most widespread and destructive. Record floodflows occurred with the 1955 flood, and resulted in the loss of 37 lives when a levee on the Feather River south of Yuba City failed. Modifications to flood protection facilities in the intervening 10 years, including partial completion of the State's Oroville Dam project, helped to prevent damage during the 1964-65 flood that may well have exceeded that caused by the 1955 flood event. Despite existing flood protection to the area, it is still vulnerable to catastrophic flooding as demonstrated by the flood in February 1986. During the February 1986 flood, the south levee on the Yuba River failed, inundating the towns of Linda and Olivehurst to depths of about 10 feet. Over 24,000 people were evacuated and damages were estimated at $95 million. The California Reclamation Board, the local sponsor, signed the Feasibility Cost Sharing Agreement in September 1991.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to complete the feasibility phase of the study. The estimated cost of the feasibility phase is $2,100,000 which is being shared on a 50-50 basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,620,000
Reconnaissance Phase (Federal)	520,000
Feasibility Phase (Federal)	1,050,000
Feasibility Phase (Non-Federal)	1,050,000

The reconnaissance phase was completed in September 1991. The feasibility study is scheduled for completion in February 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Sacramento-San Joaquin, Delta, Little Holland Tract	500,000	0	210,000	290,000	0

Little Holland Tract is a 1640 acre island located entirely within the Yolo Bypass about 20 miles southwest of Sacramento, California. It is subject to tidal influence from the northern edge of the Sacramento-San Joaquin Delta. The Sacramento-San Joaquin Drainage District retains a flowage easement over the entire tract. This easement requires that levees surrounding the tract be kept at lower elevations than levees bordering the Yolo Bypass enabling overtopping of the tract's levees during high flow events in the Yolo Bypass. The area has been inundated and subject to tidal action continually since the levees failed in 1983. Since that time, the area has developed and matured as a tidally influenced wetland with numerous willow trees and a tule marsh in the shallower, northern end of the tract. The California Department of Fish and Game indicates that varying water depth on the tract provides a range of habitat from shallow wading habitat for shorebirds to deeper water for diving ducks and white pelicans. The purpose of the study is to determine Federal interest in flood damage prevention and environmental restoration projects on Little Holland Tract and the adjacent 4,750 acre Liberty Island located just west of Little Holland Tract. Fiscal Year 1995 funds are being used to initiate the reconnaissance phase of the study at full Federal expense. Funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase. The reconnaissance phase is scheduled for completion in April 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Sacramento-San Joaquin Delta, Prospect Island	875,000	188,000	168,000	100,000	419,000

The study area is located in Solano County, California in the northwest portion of the Sacramento-San Joaquin Delta region, approximately 25 miles southwest of the city of Sacramento. Prospect Island is a five mile long, rectangular island comprised of 1,580 acres, bordered by the Sacramento River Deep Water Ship Channel to the west and Miner Slough and Ryer Island to the east. Prospect Island was recently flooded, in 1983 and again in 1986. The Sacramento River Deep Water Ship Channel, constructed and completed by the Corps in 1963, was excavated through Prospect Island, parallel to its length. As part of the agreement with the landowners on the island, the Corps constructed project levees adjacent to the channel and assumed responsibility for operation and maintenance. These project levees are damaged by wave wash from passing ocean vessels in the ship channel, requiring regular maintenance and repair. The construction of the ship channel and reclamation of adjacent lands have contributed significantly to the loss of valuable wetlands in the study area. Wetlands in the Delta today are only a fraction of the vast tidal marshlands that existed in the area during the last century. The Delta's diverse ecosystems are a critical habitat for millions of migrating and resident waterfowl, fish and other flora and fauna, including many designated as endangered or threatened species. The purpose of the study is to determine Federal interest in an environmental restoration project on Prospect Island. The costs of operating and maintaining the existing ship channel and associated levees could be reduced, and needed wetlands could be created. One proposal under consideration is to discontinue the use of the existing project levees, inundate the island, and create wetlands. Flood damage prevention will also be studied in conjunction with environmental restoration. The State of California Department of Water Resources, the local sponsor, expressed support for the study in April 1994, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost Sharing Agreement is scheduled to be signed in August 1995.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase of the study and, if the reconnaissance report is certified to be in accord with policy, continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $1,050,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

FLOOD DAMAGE PREVENTION - Sacramento-San Joaquin Delta, Prospect Island (Cont'd)

Total Estimated Study Cost	$1,400,000
Reconnaissance Phase (Federal)	350,000
Feasibility Phase (Federal)	525,000
Feasibility Phase (Non-Federal)	525,000

The reconnaissance phase is scheduled for completion in August 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
San Antonio Creek	450,000	0	300,000	150,000	0

The San Antonio-Chino Creek drainage system is located in the southwestern corner of San Bernardino County and the eastern edge of Los Angeles County, California, and includes the cities of Chino, Chino Hills, Claremont, Diamond Bar, La Verne, Montclair, Pomona and Ontario. San Antonio Creek originates on the south flank of the San Gabriel mountains, draining 89 square miles. The 15-mile creek crosses a large alluvial outwash plain and is joined by Chino Creek before entering the Prado Basin. The area is protected by two Corps projects, San Antonio Dam, constructed in 1954, and the San Antonio-Chino Creek improvements, constructed in 1960. Since completion of these projects, the area has experienced rapid urbanization; growth has greatly exceeded original projections, with the current population estimated to be 2 million people. Existing flood control projects no longer provide either adequate protection or their original design capacity. The study will evaluate the potential of flooding and overflows within the watershed and develop conceptual solutions to the flooding problems.

Fiscal Year 1995 funds are being used to initiate the reconnaissance phase of the study. Funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase at full Federal expense. The reconnaissance phase is scheduled for completion in July 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
San Joaquin River Basin, Arroyo Pasajero (Fresno County)	3,195,000	$1,170,000	850,000	700,000	475,000

The study area is located near the town of Coalinga, in central California and is about 50 miles southwest of the city of Fresno. Arroyo Pasajero is an ephemeral stream that flows from the Coast Range and has formed an alluvial fan along the west side of the San Joaquin Valley. Floodwaters overflow the defined channel of the stream during significant storms and spread overland. In 1967 the California Aqueduct was built and flood protection facilities were constructed consisting of a shallow retention basin, a gated evacuation culvert beneath the Aqueduct, and an inlet into the Aqueduct for Arroyo Pasajero. Existing flood protection facilities have proven inadequate. Updated hydrologic and sedimentation studies indicate that both the estimated average annual sediment loads and 100-year storm volumes are several times greater than original design estimates. Floodflows threaten the structural integrity of the Aqueduct as well as cause significant damage to agriculture and public facilities in the communities of Coalinga (population 9,600) and Huron (population 5,700), and the Lemoore Naval Air Station. Flood damages to the California Aqueduct in the area of Arroyo Pasajero are estimated at $10,000,000 annually. This stream is also a major source of asbestos. The sources of asbestos are naturally occurring serpentine soils and several abandoned asbestos mines in the upper watershed of Los Gatos Creek, a major tributary to Arroyo Pasajero. The Aqueduct furnishes a significant portion of the water supply for millions of Southern Californians. Potential projects include enlargement of the retention basin at Arroyo Pasajero adjacent to the Aqueduct, an Aqueduct overchute crossing to convey floodwaters over the Aqueduct, an eastside channel and detention plan, and asbestos abatement measures. The California Department of Water Resources, the local sponsor, signed the Feasibility Cost Sharing Agreement in January 1994.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The estimated cost of the feasibility phase is $4,660,000, which is being shared on a 50-50 basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

FLOOD DAMAGE PREVENTION - San Joaquin River Basin, Arroyo Pasajaro (Fresno County) (Cont'd)

Total Estimated Study Cost	$5,525,000
Reconnaissance Phase (Federal)	865,000
Feasibility Phase (Federal)	2,330,000
Feasibility Phase (Non-Federal)	2,330,000

The reconnaissance phase was completed in January 1994. The feasibility study is scheduled for completion in June 1997.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
San Joaquin River Basin, Caliente Creek Stream Group	2,944,000	2,521,000	252,000	171,000	0

The study area is in Kern County, California about 15 miles southeast of the city of Bakersfield. Caliente Creek Stream Group drains an area of about 800 square miles and its 100-year floodplain encompasses about 50,000 acres of prime agricultural lands. The towns of Arvin and Lamont, with a combined population of approximately 22,000, are also in this floodplain. Rainstorm flooding during February and March 1978 caused damages of about $7.6 million in the area. Flooding during March 1983 caused damages to crops and agricultural facilities, homes, highways, businesses and schools. Damages below the mouth of Caliente Creek where it enters the southern San Joaquin valley were estimated at $21 million.

Funds received prior to Fiscal Year 1985 were used to fund the reconnaissance phase at full Federal expense. The feasibility phase was initiated in Fiscal Year 1985 at Federal expense with agreement by the Kern County Water Agency, the local sponsor, to share 50 percent of the costs of the feasibility phase when cost sharing was implemented. The effective date of implementation of cost sharing was March 15, 1986. Feasibility studies were completed and preconstruction engineering and design was initiated in December 1988. However, additional sediment and design studies, plan formulation, and economic analyses were subsequently determined to be necessary as well as a revised wildlife mitigation plan due to the loss of previously identified mitigation lands and listing of an endangered plant species. In August 1991, the Kern County Water agency expressed support for the need for further feasibility phase studies. A new Feasibility Cost Sharing Agreement was signed in October 1992. This additional feasibility study effort is investigating alternative measures including non-structural methods, levees, sumps, flood warning systems and floodways to reduce flooding in and around the urban areas of Arvin and Lamont.

Fiscal Year 1995 funds are being used to continue feasibility studies in accordance with the new Feasibility Cost Sharing Agreement. The funds requested for Fiscal Year 1996 will be used to complete the feasibility phase of the study. The estimated cost of the feasibility phase is $3,136,000. A summary of study cost sharing is as follows:

FLOOD DAMAGE PREVENTION - San Joaquin River Basin, Caliente Creek Stream Group

Total Estimated Study Cost	$4,091,000
Reconnaissance Phase (Federal)	955,000
Feasibility Phase (Federal)	1,989,000
Feasibility Phase (Non-Federal)	1,147,000

The feasibility study is scheduled for completion in September 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
San Joaquin River Basin, Kaweah River	1,757,000	1,457,000	260,000	40,000	0

The Kaweah River Basin is within the Tulare Lake Basin and located in the southeastern portion of the San Joaquin Valley between the cities of Fresno and Bakersfield, California. The Kaweah River originates in the Sierra Nevada mountains and drains about 560 square miles into Lake Kaweah (Terminus Lake). From Lake Kaweah it passes near the city of Visalia, with a population of about 89,000, as it flows west into the Tulare Lakebed. Terminus Dam was completed in 1962 to provide flood control and irrigation water supply. However, significant flood damages to communities and highly developed agricultural lands along the Kaweah River have continued to occur. Flood releases beyond Terminus Dam capacity have contributed to flood damages to agricultural lands in the Tulare Lakebed. The December 1966 rainflood exceeded the design capacity of Terminus Dam and floodflows passing downstream of the dam resulted in about $1.0 million in damages below the dam, under conditions and prices at that time. If such an event were to occur today with current prices, damages would amount to about $4.6 million. These downstream flows peaked at about 5,700 cubic feet per second and inundated about 8,000 acres. The most recent flooding in 1983 caused extensive and widespread damages to properties in the Tulare Lakebed area where losses attributed to the Kaweah River were estimated at $17.6 million. Because of these significant floods, local interests have requested that the Corps of Engineers study the potential of enlarging Terminus Dam to provide greater flood protection and conservation storage. The study is also addressing flood control and conservation storage on Dry Creek, a tributary of the Kaweah River, downstream from Terminus Dam. The Kaweah Delta Water Conservation District, the local sponsor, signed the Feasibility Cost Sharing Agreement in January 1988.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to complete the feasibility phase of the study. The estimated cost of the feasibility phase is $2,864,000, which is to be shared on a 50-50 basis by Federal and non-Federal interests. Up to one half of the non-Federal share will be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,189,000
Reconnaissance Phase (Federal)	325,000
Feasibility Phase (Federal)	1,432,000
Feasibility Phase (Non-Federal)	1,432,000

FLOOD DAMAGE PREVENTION - San Joaquin River Basin, Kaweah River (Cont'd)

The reconnaissance phase was completed in January 1988. The feasibility study is scheduled for completion in February 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
San Joaquin River Basin, Pine Flat Dam, Fish and Wildlife Habitat Restoration	2,000,000	500,000	168,000	500,000	832,000

The study area includes the Kings River watershed located east of the city of Fresno in central California. The Kings River Basin drains 1,542 square miles into the Tulare Lakebed via the Kings River South distributary and to the San Joaquin River via the Kings River North (Fresno Slough) distributary. Pine Flat Dam, constructed by the Corps of Engineers in 1954, is located on the Kings River 25 miles east of Fresno. It creates a reservoir with a capacity of 1,000,000 acre-feet for flood control, irrigation, and related purposes. Minimal mitigation features were included to offset significant losses of stream, riparian, and upland habitats along the Kings River, and vast wetlands in the Tulare Lake Basin. Consequently, degradation of fish and wildlife habitat still remains. Significant agricultural and suburban developments have occurred in the area affected by the project. A major segment of the Kings River above Pine Flat has been designated a Special Management Area under the Wild and Scenic Rivers Act of 1968. This area is designated primarily for recreational use. It also provides for the preservation of fish and wildlife resources and of natural, scenic and archeological values. The study will investigate impacts of original project construction, impacts of a minimum pool, minimization of lake fluctuations during fish spawning, improvement of trout population, and improvement of wetlands and wildlife habitat along the Kings River. The Kings River Conservation District, the local sponsor, expressed support for the study in April 1994, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost Sharing Agreement is scheduled to be signed in April 1995.

If the reconnaissance report is certified to be in accord with policy, Fiscal Year 1995 funds will be used to continue into the feasibility phase of the study. Funds requested for Fiscal Year 1996 funds will be used to continue feasibility phase studies. The estimated cost of the feasibility phase is $3,000,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

FLOOD DAMAGE PREVENTION - San Joaquin River Basin, Pine Flat Dam Fish and Wildlife Habitat Restoration (Cont'd)

Total Estimated Study Cost	$3,500,000
Reconnaissance Phase (Federal)	500,000
Feasibility Phase (Federal)	1,500,000
Feasibility Phase (Non-Federal)	1,500,000

The reconnaissance phase is scheduled for completion in April 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
San Joaquin River Basin, South Sacramento County Streams	2,070,000	630,000	168,000	500,000	772,000

The South Sacramento County Streams drainage basin is located in the southeastern portion of Sacramento County, California. The study area consists of the Morrison Creek Stream Group Basin, approximately 180 square miles in size. The basin includes Morrison, Elder, Unionhouse, Florin, and Laguna Creeks; a portion of the city of Sacramento and unincorporated portions of Sacramento County; the communities of Florin, Elk Grove, and Franklin; and the Sacramento Army Depot and former Mather Air Force Base. The study is addressing flooding on Morrison, Elder, Unionhouse and Laguna Creeks. Significant development has occurred in the upper basin, in the Elk Grove area, which is increasing the runoff and potential for flooding. No Federal water resource development projects exist in the area. Significant flooding occurred in 1952, 1955, 1962, 1963, 1967, 1969, 1973, 1982, and 1986. By 1995, approximately 6,500 homes and other structures are expected to be within the 500-year floodplain with an estimated value of $190 million. Levees along Morrison Creek and tributaries provide less than a 100-year level of flood protection. Potential projects include a combination of channel and levee improvements and detention facilities. The study is supported by the City and County of Sacramento and the California Water Commission. The Sacramento Area Flood Control Agency, together with the City and County of Sacramento, expressed support for the study in March 1994, understands the two-phase planning process and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost Sharing Agreement is scheduled to be signed in March 1995.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase of the study at full Federal expense and, if the reconnaissance report is certified to be in accord with policy, to continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The estimated cost of the feasibility phase is $2,800,000, which is to be shared on a 50-50 basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

FLOOD DAMAGE PREVENTION - San Joaquin River Basin, South Sacramento County Streams (Cont'd)

Total Estimated Study Cost	$3,470,000
Reconnaissance Phase (Federal)	670,000
Feasibility Phase (Federal)	1,400,000
Feasibility Phase (Non-Federal)	1,400,000

The reconnaissance phase is scheduled for completion in March 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Santa Barbara County Streams, Lower Mission Creek	2,049,000	1,549,000	419,000	81,000	0

The study area is located in Santa Barbara County about 100 miles northwest of Los Angeles, California. Mission Creek drains an area of 12.2 square miles and flows from the south slope of the Santa Ynez Mountains through heavily developed portions of the city of Santa Barbara into the Pacific Ocean. Since 1960, the population has increased over 120 percent in Santa Barbara County and 40 percent in the Mission Creek area. The Mission Creek floodplain is a fully developed residential, commercial, and industrial area. In 1980, a flood damaged residential and commercial property and closed State Highway 101, a major transportation route between Los Angeles and the northern California coastal cities of San Jose and San Francisco. The floods of 1978 and 1980 resulted in a demand for flood protection along Mission Creek, the greatest unsolved flood hazard of any stream in the county. A feasibility report that was completed by the Corps in Fiscal Year 1986 recommended a project of 1.2 miles of concrete channelization for the lower portion of Mission Creek which would provide a 100-year level of flood damage protection. The project was subsequently authorized for construction by the Water Resources Development Act of 1988. However in 1993, during preconstruction engineering and design, it was determined that the recommended plan would not function as authorized due to hydraulic sedimentation problems. Environmental conditions have also changed in the study area due to the presence of the Tidewater Goby, an endangered fish species. Local interests continue to strongly support a project for flood control and the study of the area's flooding problems.

Fiscal Year 1995 funds are being used to initiate the reconnaissance phase of the study. The funds requested for Fiscal Year 1996 funds will be used to complete the reconnaissance phase at full Federal expense. The reconnaissance phase is scheduled for completion in February 1996.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Seven Oaks and Prado Dams Water Conservation	$1,168,000 1/	503,000	400,000	265,000	0

Seven Oaks and Prado Dams are located on the Santa Ana River in Riverside and San Bernardino Counties, California. Water conservation is an increasingly important consideration in the arid Southern California environment. At a time when imported water supplies are being reduced, it is essential that additional sources of clean water be investigated in an area of rapid population growth. The study will address conditions as they will exist with the Santa Ana River Mainstem project in place and will investigate seasonal water conservation potential to determine whether any modifications for the intent of water conservation are economically justified. Within funds appropriated for construction of the Santa Ana River Mainstem project, $500,000 was used for the reconnaissance study to review the feasibility of water conservation at Seven Oaks and Prado Dams. The Reconnaissance Report completed in October 1992, recommended Seven Oaks Dam portion of the study proceed into the feasibility phase and a re-operation study be conducted for Prado Dam. The San Bernardino County Flood Control District, the local sponsor, signed the Feasibility Cost Sharing Agreement in December 1993.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to complete the feasibility study. The estimated cost of the feasibility phase is $2,180,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,258,000
Reconnaissance Phase (Federal)	78,000 1/
Feasibility Phase (Federal)	1,090,000
Feasibility Phase (Non-Federal)	1,090,000

1/ Excludes $500,000 for reconnaissance phase appropriated under Construction, General.

The reconnaissance phase was completed in December 1993. The feasibility study is scheduled for completion in January 1997.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Upper Guadalupe River	2,580,000	1,820,000	246,000	285,000	229,000

The Upper Guadalupe River study area is located in the city of San Jose, Santa Clara County, California. The reach of river proposed for improvement begins 1,800 feet upstream of the Southern Pacific Railroad crossing at the edge of downtown San Jose and extends south for about 5.0 miles to Blossom Hill Road. The Guadalupe River, extending from the community of Alviso at the river's mouth upstream for about 21 miles, is one of the major drainage areas in Santa Clara Valley. The Valley experiences periodic flooding as a result of high intensity rainstorms which occur every few years. In 1958, the largest flood on record caused damages of about $1.3 million in the region. Recent flooding in the Upper Guadalupe Basin occurred on four occasions during the 1980's. It is estimated that the 100-year flood event in the study area would flood over 2,200 acres affecting over 8,300 structures, including six schools and cause an estimated $112 million in damages. The potential for additional flood damage is expected to increase as development continues in this highly urbanized area. The feasibility study is evaluating a variety of non-structural and structural plans of improvement for flood protection in the Upper Guadalupe Basin. The Santa Clara Valley Water District, the local sponsor, signed the Feasibility Cost Sharing Agreement in October 1990.

Fiscal Year 1995 funds are being used to continue the feasibility study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The estimated cost of the feasibility phase is $4,200,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$ 4,680,000
Reconnaissance Phase (Federal)	480,000
Feasibility Phase (Federal)	2,100,000
Feasibility Phase (Non-Federal)	2,100,000

The reconnaissance phase was completed in October 1990. The feasibility study is scheduled for completion in August 1997.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - FLOOD DAMAGE PREVENTION					
Whitewater River Basin	2,080,000	535,000	310,000	370,000	865,000

The Whitewater River flows through the cities of Palm Springs, Rancho Mirage, Palm Desert and other communities located in the Coachella Valley in San Bernardino and Riverside Counties, California. The Whitewater River is the Coachella Valley's main stormwater channel, draining approximately 1,600 square miles. The channel's banks traditionally sustain extensive damage during flash floods, creating the potential for damages to the adjacent communities. Seven major floods occurred between 1965 and 1980. The July 1979 flood caused damages estimated at $31.5 million ($67.5 million at 1994 prices) and the September 1976 flood caused damages estimated at $18 million ($48.1 million at 1994 prices). Since 1976, the Corps of Engineers and the Coachella Valley Water District have solved some of the flood related problems; yet with nearby communities experiencing increasing development, problems still exist. Development in the basin is occurring at one of the most rapid rates in the state, which has increased potential damages from flood, and associated water resource problems in recent years. The reconnaissance study investigated flood damage reduction and related purposes for the entire Whitewater River basin, from the base of the San Bernardino Mountains to the Salton Sea, approximately 50 miles. Although the reconnaissance study determined that there is no apparent Federal interest in any further study of the erosion problems on the mainstem of the Whitewater River, it identified a significant flooding problem in the portion of the Coachella Valley north of Interstate Highway 10. This region is the last major undeveloped area within the upper Coachella Valley, however, development of the Thousand Palms area has greatly accelerated in recent years. The Coachella Valley Water District, the local sponsor, expressed support for the study in January 1993, understands the two-phase planning process and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost-Sharing Agreement was signed in July 1994.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase. The preliminary estimated cost of the feasibility phase is $3,310,000, which is to be shared on a 50-50 basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
FLOOD DAMAGE PREVENTION - Whitewater River Basin (Cont'd)					
Total Estimated Study Cost		$3,735,000			
Reconnaissance Phase (Federal)		425,000			
Feasibility Phase (Federal)		1,655,000			
Feasibility Phase (Non-Federal)		1,655,000			

The reconnaissance phase was completed in July 1994. A completion date is being determined for this feasibility study.

TOTAL FLOOD DAMAGE PREVENTION STUDIES	33,813,000	14,787,000	6,957,000	5,732,000	6,337,000

C. Shoreline Protection Studies: The amount of $1,028,000 is requested to continue two studies and complete three studies in Fiscal Year 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
California					
Encinitas	400,000	0	231,000	169,000	0

The study area is located in San Diego County, California, about 15 miles north of San Diego and 70 miles southeast of Los Angeles and Long Beach Harbors. The coastal area is under the jurisdiction of the City of Encinitas. Development along the coast is diverse and includes such commercial activities as hotels, restaurants and recreation facilities valued over $20 million. Residential development is also extensive. Tourism is a major source of income to the city of Encinitas, and many people are employed in beach related-activities which has been severely impacted by the eroding beach area. Information and technical findings from the Coast of California Storm and Tidal Wave Study, which was completed by the Corps in September 1991, indicate that the beaches in the Encinitas area have been eroding since 1979 due to moderate nourishment activities and the relatively severe storms of 1982, 1983, and 1988. Continued beach erosion could lead to considerable losses and damages to commercial and public developments at many locations. The reconnaissance study will address the shoreline erosion problems and assess the storm damage potential along the Encinitas coastal area.

Fiscal Year 1995 funds are being used to initiate the reconnaissance phase of the study. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase of the study. The reconnaissance phase is scheduled to be completed in April 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - SHORELINE PROTECTION					
Malibu Coastal Area	875,000	350,000	168,000	200,000	157,000

The study area is located along the Los Angeles coastline about 20 miles west of downtown Los Angeles, California. The coastline along the Malibu area is the most vulnerable area for catastrophic damages from coastal storms and consists of over 100 residential, commercial, and public structures valued over $100 million. Portions of the area and shoreline have experienced severe coastal storms and remain vulnerable to future storm events. This area was damaged by coastal storms in 1978, 1980, 1982, 1983, 1986, and 1988. The 1978 storms caused damages of $4 million ($8 million at current prices) to private property and $1 million ($2 million at current prices) to public property. Winter storms in 1983 caused significant shoreline erosion in many locations, and wave attack damaged public and private property along the coastline. There is little or no protective beach fronting development, resulting in the area having a high potential for severe damages and threat to health and safety. The reconnaissance study results indicate a Federal interest in providing shore protection to the Las Tunas beach area of Los Angeles county. Other areas have serious problems but lack public interest due to limited public access and parking. The Los Angeles County Department of Beaches and Harbors, the local sponsor, expressed support for the study in January 1993, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost-Sharing Agreement is scheduled to be signed in April 1995.

If the reconnaissance report is certified to be in accord with policy, Fiscal Year 1995 funds will be used to continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $1,050,000 which is to be shared on a 50-50 percent basis by the Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$1,400,000
Reconnaissance Phase (Federal)	350,000
Feasibility Phase (Federal)	525,000
Feasibility Phase (Non-Federal)	525,000

SHORELINE PROTECTION - Malibu Coastal Area (Cont'd)

The reconnaissance phase is scheduled for completion in April 1995. The feasibility study is scheduled for completion in September 1997.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - SHORELINE PROTECTION					
Marin County Shoreline, San Clemente Creek	1,122,000	743,000	145,000	234,000	0

The study area is located along San Clemente Creek in the town of Corte Madera, Marin County, California, about 10 miles north of San Francisco. As a result of extreme high tides in the San Francisco Bay or severe rain storms coinciding with extreme high tides, urban and public improvements are subjected to tidal flooding as evidenced in January 1982. Engineering studies conducted by the Town of Corte Madera in June 1988 and by the Corps in 1992 indicate that continual subsidence of the land surface in local residential areas, due to consolidation of underlying bay muds, will increase the potential of tidal flooding each year. The total estimated value of property improvements potentially subjected to tidal flood damages is approximately $60 million. Studies performed to date indicate that a barrier with a tide gate system or onshore flood wall to prevent tidal inundation may be the means to prevent further flooding. The feasibility study is evaluating alternatives for preventing tidal related flood damages. Without such relief, the residences and businesses located in the area would continue to experience flooding at an accelerated rate due to tidal flows and the continued subsidence of the underlying bay muds upon which they have been built. The Town of Corte Madera, the local sponsor, signed the Feasibility Cost Sharing Agreement in June 1993.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to complete the feasibility study. The estimated cost of the feasibility phase is $1,350,000 which is to be shared on a 50-50 basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$1,797,000
Reconnaissance Phase (Federal)	447,000
Feasibility Phase (Federal)	675,000
Feasibility Phase (Non-Federal)	675,000

The reconnaissance phase was completed in June 1993. The feasibility study is scheduled for completion in May 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - SHORELINE PROTECTION					
San Diego County, Cities of Oceanside and Carlsbad	1,910,000	860,000	150,000	300,000	600,000

The Cities of Oceanside and Carlsbad are located on the Southern California coast within San Diego County, about 30 miles north of San Diego Harbor. Development along the cities' coast is diverse, including commercial hotels, restaurants, shops and extensive recreation areas. A study to alleviate severe storm damage was conducted in the 1970's, but no solution resulted that was acceptable to the local recreation association or the State of California Resources Agency. The study, San Diego County, Vicinity of Oceanside, was subsequently deauthorized. The erosion of protective beaches along the coast has caused backshore development to be highly vulnerable to flooding and wave damage from coastal storms. Damages from past storms consisted of $600,000 in 1980, ($1.2 million at current prices), and over $4 million in 1983 ($8 million at current prices). Separate reconnaissance studies were completed in Fiscal Year 1994 for Oceanside Shoreline and Pacific Coast Shoreline, Carlsbad. Results of the reconnaissance studies indicate a Federal interest in providing shore protection improvements to both Oceanside and Carlsbad. Due to the contiguous shorelines and interdependence of the physical processes in the area, the two studies have been combined resulting in a reduction of the overall cost of the feasibility phase of the study. Both the City of Oceanside and the City of Carlsbad, the local sponsors, expressed support for the study in August 1994, understand the two-phase study process, and are willing to consider participation in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost-Sharing Agreement is scheduled to be signed in April 1995.

If the reconnaissance report is certified to be in accord with policy, Fiscal Year 1995 funds will be used to continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $2,100,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,960,000
Reconnaissance Phase (Federal)	860,000
Feasibility Phase (Federal)	1,050,000
Feasibility Phase (Non-Federal)	1,050,000

SHORELINE PROTECTION - San Diego County, Cities of Oceanside and Carlsbad (Cont'd)

The reconnaissance phase is scheduled for completion in April 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - SHORELINE PROTECTION					
San Francisco County, Ocean Beach	1,100,000	820,000	155,000	125,000	0

The study area is Ocean Beach, located along the western boundary of San Francisco, California, which acts as the buffer between the Great Highway and the Pacific Ocean. In the 1930's, the City of San Francisco constructed a one mile long reinforced concrete seawall along the north end of the study area. In 1983, the Westside Sewer Transport Project, a 2-1/2 mile long, 30-foot wide box culvert was constructed under the Great Highway at a cost of $60 million. The 2.3 miles of bluffs and dunes along Ocean Beach have been subject to erosion for many years. Storm waves now pose a serious threat to the Great Highway, the Westside Sewer Transport and nearby residences. The City recently constructed a 2,950-foot long seawall where the erosion is most serious. However, this is only a partial solution to the overall shoreline erosion problem. The study will address the development of long-term solutions for the protection of the highway, a major transportation artery, and the sewer facility. Damage to the sewer could cause severe hardship and a health hazard to the city. The reconnaissance study determined that dune nourishment could be the best solution. The City of San Francisco, the local sponsor, signed the Feasibility Cost Sharing Agreement in September 1992.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to complete the feasibility study. The estimated cost of the feasibility phase is $1,230,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$1,715,000
Reconnaissance Phase (Federal)	485,000
Feasibility Phase (Federal)	615,000
Feasibility Phase (Non-Federal)	615,000

The reconnaissance phase was completed in September 1992. The feasibility study is scheduled for completion in August 1996.

TOTAL SHORELINE PROTECTION STUDIES	5,407,000	2,773,000	849,000	1,128,000	757,000

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
d. Special Studies: The amount of $2,035,000 is requested to continue four studies in Fiscal Year 1996.					
California					
Central Basin Groundwater Project	1,875,000	750,000	0	375,000	750,000

The Central Ground Water Basin is located in southeastern Los Angeles County, California, just downstream of Whittier Narrows. Situated between two large ranges of hills, Whittier Narrows acts as a narrow hydrologic connection between two massive groundwater basins, the San Gabriel Basin and the Central Basin. In recent years, industrial contaminants and toxic pollutants, contained in a large groundwater plume previously restricted to small area within the upper San Gabriel Basin, have begun to expand at an alarming rate toward Whittier Narrows. Because Whittier Narrows contains the Corps of Engineers Whittier Narrows Flood Control Dam and Recreation Area, which provides water control to a large portion of the metropolitan Los Angeles area, this problem is of particular concern to the community. The storage of water at the Whittier Narrows project facilitates groundwater recharge and may exacerbate the spread of the contaminated groundwater. Development of complex measures for containment, including the evaluation of the operation of existing Federal flood control facilities, will be required as part of a multi-objective solution of the problem. Concerns expressed by local governments, water supply agencies, environmental agencies, and residents is that the contaminated groundwater plume will continue its current migratory pattern into and through Whittier Narrows, and then gain access to the Central Basin, the primary source of water for more than a dozen communities in the area. The Water Replenishment District has expressed support for the study and is willing to participate in 50-50 cost sharing of the feasibility phase study. The Feasibility Cost-Sharing Agreement is scheduled to be signed in October 1995.

Fiscal Year 1994 funds are being used to initiate and complete the reconnaissance phase of the study at full Federal expense. No funds are budgeted for Fiscal Year 1995. If the reconnaissance report is certified to be in accord with policy, the funds requested for Fiscal Year 1996 will be used to continue into the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $2,250,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

SPECIAL STUDIES - Central Basin Groundwater Project (Cont'd)

Total Estimated Study Cost	3,000,000
Reconnaissance Phase (Federal)	750,000
Feasibility Phase (Federal)	1,125,000
Feasibility Phase (Non-Federal)	1,125,000

The reconnaissance phase is scheduled for completion in October 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - SPECIAL STUDIES					
Los Angeles County Drainage Area Water Conservation and Supply (Hansen and Lopez Dams)	1,270,000	150,000	250,000	400,000	470,000

The study area is located in Los Angeles County, California about 20 miles northwest of the city of Los Angeles. The watershed that drains into Hansen and Lopez Dams includes an area of 152 square miles. Los Angeles County uses approximately 2 million acre-feet of water annually from available local water supply and outside supply sources, which account for two-thirds of this total. Each of these sources are limited as to possible expansion in the future and, as a result, protection and development of local groundwater sources and conservation of storm water runoff are becoming increasingly important. Water storage reserves have diminished considerably due to population growth and years of drought. The study is investigating various methods for the capture and release of surface flows for groundwater recharge and water conservation. Water conservation operations for groundwater recharge include utilization of the debris pool for water conservation during the flood season, and an expanded seasonal water conservation after the flood season. The reconnaissance report, recommending continuing into two feasibility studies, one for Hansen and Lopez Dams and the other for Santa Fe and Whittier Narrows Dams, was completed in May 1994. The Los Angeles County Department of Public Works, which will also represent various water districts, expressed support for the study in April 1994, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost-Sharing Agreement was signed in December 1994.

Fiscal Year 1995 funds are being used to continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $2,240,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,390,000
Reconnaissance Phase (Federal)	150,000
Feasibility Phase (Federal)	1,120,000
Feasibility Phase (Non-Federal)	1,120,000

SPECIAL STUDIES - Los Angeles County Drainage Area Water Conservation and Supply (Hansen and Lopez Dams) (Cont'd)

The reconnaissance phase was completed in December 1994. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - SPECIAL STUDIES					
Los Angeles County Drainage Area Water Conservation and Supply, (Santa Fe and Whittier Narrows Dams)	1,360,000	150,000	250,000	460,000	500,000

The study area is located in Los Angeles County, California about 10-15 miles east of the city of Los Angeles. The San Gabriel and Rio Hondo Rivers watershed drains 767 square miles. Alternatives under study include water conservation operations at Santa Fe and Whittier Narrows Dams. Los Angeles County uses approximately 2 million acre-feet of water annually from available local water supply and outside supply sources, which account for two-thirds of this total. Each of these sources are limited as to possible expansion in the future and, as a result, protection and development of local groundwater sources and conservation of storm water runoff are becoming increasingly important. Water storage reserves have diminished considerably due to population growth and years of drought. The study is investigating various methods for the capture and release of surface flows for groundwater recharge and water conservation during the flood season, and an expanded seasonal water conservation after the flood season. The reconnaissance report, recommending continuing into two feasibility studies, one for Hansen and Lopez Dams and the other for Santa Fe and Whittier Narrows Dams, was completed in May 1994. The Los Angeles County Department of Public Works, which will also represent various water districts, expressed support for the study in April 1994, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost-Sharing Agreement was signed in December 1994.

Fiscal Year 1995 funds are being used to continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $2,420,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,570,000
Reconnaissance Phase (Federal)	150,000
Feasibility Phase (Federal)	1,210,000
Feasibility Phase (Non-Federal)	1,210,000

SPECIAL STUDIES - Los Angeles County Drainage Area Water Conservation and Supply (Santa Fe and Whittier Narrows Dams) (Cont'd)

The reconnaissance phase was completed in December 1994. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - SPECIAL STUDIES					
Sacramento-San Joaquin Delta	5,940,000	3,894,000	261,000	800,000	985,000

The study area is located in Sacramento, San Joaquin, and Contra Costa Counties, California and extends from Walnut Grove south to Tracy and from the city of Stockton west to Suisun Bay. The area within the Sacramento-San Joaquin Delta consists of about 700,000 acres of land segregated into some 100 tracts and islands, bounded by interconnecting waterways and surrounded by 1,100 miles of levees which normally prevent the lands from being inundated by high tides or high river stages. However, flood protection is inadequate for the islands and tracts within the study area. Over 140 levee failures have occurred in the Delta since 1900. About 30 of these failures have occurred since 1980. Lands within these levees are among the most productive agricultural lands in the State, and failures due to levee instability are becoming more prevalent. The major reasons for this instability are the subsidence of island interiors and poor foundation conditions of existing levees. Also, water quality degradation occurs due to saltwater intrusion resulting from levee failures. Damages from levee failures and costs associated with maintenance work are increasing. The most recent levee failures in the study area were in February 1986, which caused damages estimated at $17 million. The purpose of the study is to determine viable improvements for flood control, salinity intrusion caused by levee failures, navigation, recreation, fish and wildlife, and long term management of the complex island/waterway network in the Delta. The State of California, the local sponsor, signed the Feasibility Cost Sharing Agreement in August 1991. The State and the Corps are conducting the cost-shared special study with the goal of producing a regional planning report for flood control, environmental restoration, and navigation.

Fiscal Year 1995 funds are being used to continue the special study including design, risk analysis, environmental, and economic studies. The funds requested for Fiscal Year 1996 will be used to continue the study. The estimated cost of the study is $8,915,000, including $5,950,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests and $2,965,000 for earlier studies at full Federal expense. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$8,915,000
Feasibility Phase (Federal)	5,940,000
Feasibility Phase (Non-Federal)	2,975,000

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SPECIAL STUDIES - Sacramento-San Joaquin Delta (Cont'd)					
The special study is scheduled for completion in February 1997.					
TOTAL SPECIAL STUDIES	10,445,000	4,944,000	761,000	2,035,000	2,705,000

e. Comprehensive Studies: None.

f. Project Review Studies: The amount of $200,000 is requested to continue one study in Fiscal Year 1996.

6 February 1995

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
SURVEYS - CONTINUING - PROJECT REVIEW					
Arizona					
Alamo Lake	1,030,000	380,000	138,000	200,000	312,000

The study area is located along the Bill Williams River at and below Alamo Dam and Reservoir in western Arizona and is about 120 miles northwest of the city of Phoenix. The project was constructed and completed in 1968 by the Corps for the authorized purposes of flood control, water conservation, and recreation. A reconnaissance study completed in 1990 identified opportunities to reoperate the dam for water conservation and recreation purposes. However, since the viable alternatives identified in that study could be accomplished within existing Corps authority, further activities and operational recommendations concerning the project were addressed under the Operation and Maintenance, General program. Subsequent studies of the river corridor from the reservoir to the Colorado River, which were conducted by the State of Arizona and environmental resource agencies, indicate that the river flows can affect riparian habitat, including habitat at the Bill Williams National Wildlife Refuge. This study will review the findings of the previous reconnaissance investigation and will evaluate the feasibility of modification of storage allocation and operation of the dam for fish and wildlife restoration and enhancement purposes. The local sponsor will be identified during the reconnaissance phase. The Feasibility Cost-Sharing Agreement is scheduled to be signed in June 1996.

Fiscal Year 1995 funds are being used to initiate the reconnaissance phase of the study. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase at full Federal expense and if the report is certified to be in accord with policy, continue into the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $900,000 which is to be shared on a 50-50 basis by the Federal and non-Federal interests. Up to one half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$1,480,000	
Reconnaissance Phase (Federal)	580,000 1/	Includes $380,000 for Section 216 study completed in 1989.
Feasibility Phase (Federal)	450,000	
Feasibility Phase (Non-Federal)	450,000	

The reconnaissance phase is scheduled for completion in June 1996. A completion date is being determined for this study.

TOTAL PROJECT REVIEW STUDIES	1,030,000	380,000	138,000	200,000	312,000

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
TOTAL SURVEYS, CONTINUING	57,695,000	24,843,000	9,290,000	10,470,000	13,092,000
TOTAL SURVEYS	58,695,000	24,843,000	9,290,000	10,950,000	13,612,000

3. Preconstruction Engineering and Design (PED), New: None

4. Preconstruction Engineering and Design (PED), Continuing:

a. Navigation: The amount of $2,169,000 is requested to continue two PED activities and complete four PED activities in Fiscal Year 1996.

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - NAVIGATION

California

Crescent City Harbor	150,000	0	0	50,000	100,000

The project is located 290 miles north of San Francisco, California and 17 miles south of the Oregon border. The harbor provides a home port and sanctuary for a west coast commercial fishing fleet consisting of 200 fishing vessels and the Coast Guard Search, Rescue and Fishing Patrol. The 5-year average annual commercial fish catch for the years 1985 thru 1990 is over 15,000 tons, valued at $13 million per year. Sand accretion in the inner harbor area has restricted access for commercial fishing vessels from the inner harbor to the loading facilities and fish boat basin mooring area. Studies under the Section 107 Continuing Authorities Program were recently terminated when it became apparent the proposed improvements, which were determined economically feasible, duplicated previously authorized but unconstructed project improvements. The feasibility report is scheduled to be completed in June 1996. The recommended project, estimated to cost $700,000 with an estimated Federal cost of $630,000 and an estimated non-Federal cost of $70,000, includes deepening the access channel from the inner harbor to the fish boat basin and the loading facilities to a depth of 14 feet. The average annual benefits amount to $529,500, all for commercial navigation. The benefit-cost ratio is 6.2 to 1 at 8 percent based on the latest economic analysis dated October 1994. The project is not yet authorized for construction. The Crescent City Harbor District, the local sponsor, expressed support for the project in December 1994 and is aware of project cost sharing requirements.

In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, local interests will be required to provide lands, easements, rights-of-way, and dredged material disposal areas, if necessary in the construction of the project; modify or relocate buildings, utilities, roads, and other facilities, except railroad bridges; pay 10 percent of the costs of construction of the portion of the project which has a depth not in excess of 20 feet; 25 percent of the portion which has a depth in excess of 20 feet; but not in excess of 45 feet; 50 percent of the portion which has a depth in excess of 45 feet and pay 10 percent of the costs allocated to navigation within a period of 30 years following completion (if not offset by a credit allowed for lands, easements, rights-of-way, relocations, and dredged material disposal areas).

Fiscal Year 1996 funds will be used to initiate preconstruction engineering and design for which the completion date is being determined.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - NAVIGATION					
Humboldt Harbor and Bay (Deepening)	660,000	0	125,000	410,000	125,000

The project is located in Humboldt Bay, Humboldt County, California, about 280 miles north of San Francisco. Humboldt Bay is the only commercial deep-draft port between Coos Bay, Oregon and San Francisco. The area has a history of high unemployment, currently over 9 percent and continues to be economically depressed. The main industry, forest products, is dependent on Humboldt Harbor for its shipping facilities. In 1991, 1,839,225 short tons of cargo passed through the harbor. Existing deep-draft forest product vessels using the harbor experience maneuvering difficulties and operating inefficiencies due to inadequate channel depths, widths, and alignments. Strong currents and high waves create additional navigation hazards within the existing channels. The feasibility report is scheduled to be completed in April 1995. The recommended project, estimated to cost $11.3 million with an estimated Federal cost of $7.5 million and an estimated non-Federal cost of $3.8 million, includes deepening three primary bay and harbor channels, with some widening included. The average annual benefits amount to $2.3 million, all commercial navigation. The benefit-cost ratio is 3.2 to 1 at 8 percent based on the latest economic analysis dated December 1994. The project is not yet authorized for construction. The Humboldt Bay Harbor, Recreation and Conservation District, the local sponsor, expressed support for the project in May 1994 and is aware of project cost sharing requirements.

In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, local interests will be required to provide lands, easements, rights-of-way, and dredged material disposal areas, if necessary in the construction of the project; modify or relocate buildings, utilities, roads, and other facilities, except railroad bridges; pay 10 percent of the costs of construction of the portion of the project which has a depth not in excess of 20 feet; 25 percent of the portion which has a depth in excess of 20 feet; but not in excess of 45 feet; 50 percent of the portion which has a depth in excess of 45 feet and pay 10 percent of the costs allocated to navigation within a period of 30 years following completion (if not offset by a credit allowed for lands, easements, rights-of-way, relocations, and dredged material disposal areas).

Fiscal Year 1995 funds are being used to initiate preconstruction engineering and design. Fiscal Year 1996 funds will be used to continue preconstruction engineering and design which is scheduled for completion in January 1997.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - NAVIGATION					
Noyo River and Harbor (Breakwater)	3,830,000	2,791,000	480,000	559,000	0

Noyo River and Harbor, located 95 miles north of Bodega Bay and 170 miles south of Humboldt Bay, is the only improved harbor along the northern California coast between Bodega Bay and Humboldt Bay. The impassibility of the existing jetties and river channel entrance during winter storms has been responsible for 38 deaths since 1943 and over 25 serious injuries in the past 30 years; in addition, 4 or 5 boats are involved in major accidents annually. The recommended project, estimated to cost $22.2 million with an estimated Federal cost of $20.0 and an estimated non-Federal cost of $2.2 million, includes the construction of a 400-foot breakwater. The project would enable vessels to enter the harbor safely, increase commercial fishing time, and reduce damages to vessels and harbor facilities caused by wave action and surge. Construction of a breakwater would also enhance the harbor's capability to act as a Harbor of Refuge during storm periods. The average annual benefits of this plan amount to $2,252,000, all commercial navigation. The benefit-cost ratio is 1.24 to 1 at 8 percent based on the latest economic analysis dated April 1992. The Noyo Harbor District, the local sponsor, expressed support for the project in February 1994 and is aware of project cost sharing requirements.

The project was authorized for construction by the River and Harbor Act of 1962. The Water Resources Development Act of 1976 (PL 94-587, Sec 146) modified the original authorization of the project to construct breakwaters as may be needed to provide necessary protection subject to environmental and economic criteria. The project authorization was also modified by the Water Resources Development Act of 1986 (PL 99-662). In accordance with the cost sharing and financing concepts reflected in the Act, the non-Federal sponsor will be required to provide lands, easements, rights-of-way and dredged material disposal areas and modify or relocate buildings, utilities, roads, bridges (except railroad bridges), and other facilities, if necessary in the construction of the project; pay 10 percent of the costs allocated to shallow draft navigation presently estimated at $2.3 million; and pay an additional 10 percent of the costs allocated to navigation within a period of 30 years following completion (if not offset by a credit allowed for lands, easements, rights-of-way, relocations and dredged material disposal areas).

NAVIGATION - Noyo River and Harbor (Breakwater) (Cont'd)

Fiscal Year 1995 funds are being used to continue preconstruction engineering and design. Fiscal Year 1996 funds will be used to complete preconstruction engineering and design in August 1996.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - NAVIGATION					
Port of Long Beach (Deepening)	750,000	0	0	750,000	0

The Port of Long Beach is located in Southern California along the Pacific coast in San Pedro Bay about 20 miles southwest of downtown Los Angeles. Deepening of the approach and entrance channels at the port is needed to accommodate large deep-draft crude tankers, which are presently arriving at the port loaded below their capacity. As the demand and import of foreign crude oil and other commerce increases in the future, there will be a greater demand for larger tanker and other liquid bulk vessels to be used at the Port of Long Beach to gain economies of scale. The Los Angeles and Long Beach Harbors feasibility study, completed in September 1992, indicated that a project for deepening the Long Beach channels to a depth of 75 feet was economically justified. These findings were used as the basis for a reconnaissance study completed in October 1994. The Energy and Water Development Appropriations Act, 1995 included $500,000 to conduct a feasibility study for Long Beach Harbor. The feasibility report is scheduled for completion in January 1996. The estimated project cost to deepen the Long Beach channel, based on the 1992 feasibility report, is $71 million, with an estimated Federal cost of $35 million and an estimated non-Federal cost of $36 million. Estimated average annual benefits are $27 million, all commercial navigation. The benefit-cost ratio is 4 to 1 at 8-1/2 percent. The Port of Long Beach, the local sponsor, expressed support for the project in March 1994 and is aware of project cost-sharing requirements.

The project is authorized for construction by the Water Resources Development Act of 1986, pending a favorable Chief of Engineers' Report. The non-Federal sponsor will be required to provide lands, easements, rights-of-way, and dredged material disposal areas, if necessary in the construction of the project; modify or relocate buildings, utilities, roads, and other facilities, except railroad bridges, if necessary in the construction of the project; pay 10 percent of the cost of construction of the portion of the project which has a depth not in excess of 20 feet; plus 25 percent which has a depth in excess of 20 feet but not in excess of 45 feet; plus 50 percent of the cost of construction of the portion of the project which has a depth in excess of 45 feet; and pay an additional 10 percent of the costs allocated to navigation within a period of 30 years following completion (if not offset by a credit allowed for lands, easements, rights-of-way, relocations, and dredged material disposal areas) and credit for work performed, authorized by the Water Resources Development Act of 1988.

NAVIGATION - Port of Long Beach (Deepening) (Cont'd)

Fiscal Year 1996 funds will be used to initiate and complete preconstruction engineering and design in December 1996.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - NAVIGATION					
Santa Barbara Harbor	550,000	376,000	124,000	50,000	0

Santa Barbara Harbor is located on the coast of Southern California, 90 miles northwest of Los Angeles and 350 miles southeast of San Francisco, within the city limits of Santa Barbara. The harbor is the home port for a 160-vessel commercial fishing fleet, including one of the largest single-port sea urchin operations worldwide. In addition, between 30 and 66 commercial fishing vessels, based at other ports, use Santa Barbara Harbor throughout the year. During periods of offshore fish runs and severe weather, many craft anchor in this harbor. The harbor is not protected against southeast storms, and fishing vessels are frequently driven ashore with resultant total loss or extensive damages. The rapid shoaling in the harbor entrance has severely restricted navigation through the harbor, especially during winter months. In 1982-1983 the harbor was closed for about 50 days because of shoaling caused by winter storms. The 1988 fish catch was about 4,000 tons, with a wholesale value of about $6 million. The loss of 50 days fishing a year results in commercial fishing losses of about $1 million. In addition, substantial maintenance dredging costs are incurred by the Federal government to clear the harbor entrance after storm events. The feasibility report was completed in September 1993. The plan of improvement recommended in the report includes the acquisition of a dredge which would be permanently located at the harbor. The plan also provides that the local sponsor would assume operation and maintenance responsibilities for the harbor. The estimated project cost is $5.84 million with an estimated Federal cost of $4.67 million and an estimated non-Federal cost of $1.17 million. The average annual benefits amount to $1.1 million, all for navigation. The benefit-cost ratio is 1.04 to 1 at 8 percent. The project is not yet authorized for construction. The City of Santa Barbara, the local sponsor, expressed support for the project in August 1993 and is aware of project cost sharing requirements.

In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor is required to provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas, if necessary in the construction of the project; modify or relocate buildings, utilities, roads, bridges (except railroad bridges), and other facilities, if necessary in the construction of the project; pay 10 percent of the costs allocated to shallow draft navigation and 35 percent of the cost allocated to storm damage prevention, during construction, and pay an additional 10 percent of the costs allocated to navigation within a period of 30 years following completion (if not offset by a credit allowed for lands, easements, rights-of-way, relocations, and borrow and excavated or dredged material disposal areas).

NAVIGATION - Santa Barbara Harbor (Cont'd)

Fiscal Year 1995 funds are being used to continue preconstruction engineering and design. Fiscal year 1996 funds will be used to complete preconstruction engineering and design in December 1995.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - NAVIGATION					
Santa Monica Breakwater	400,000	0	50,000	350,000	0

The project is located seaward of the Santa Monica Pier approximately 15 miles west of Los Angeles, California. The existing Santa Monica breakwater is 2,000 feet long and lies 1,300 feet from the shoreline. The breakwater was built in 1934 by the city of Santa Monica, running approximately parallel to the shoreline, and was designed to protect the Santa Monica Pier and shoreline facilities as well as create a safe anchorage for boats. The original crest elevation of the breakwater was 10 feet, but the structure had deteriorated to 5 feet by 1972 and now averages minus 5 feet subsequent to the storms of 1983. Currently, portions of the breakwater are submerged during high tides and pose a navigation hazard to boaters in the area. The storms of 1982-1983 caused $5.3 million in damages to the pier and facilities. Reconstruction costs spent by the city for strengthening damaged portions of the pier total over $14.3 million (1991 prices). The purpose of the project would be to provide protection to the Santa Monica Pier and adjacent shoreline facilities. The feasibility report is scheduled for completion in July 1995. The probable solution as indicated in the draft feasibility report would include restoration of 900 feet of the existing breakwater to maximize storm damage prevention and to provide shelter to commercial fishing vessels. The estimated project cost is $8.96 million, with an estimated Federal cost of $7.51 million and an estimated non-Federal cost of $1.45 million. Estimated average annual benefits are $1,815,000 ($1,431,000 commercial navigation, $384,000 storm damage prevention). The benefit-cost ratio is 2.6 to 1 at 8 percent. The project is not yet authorized for construction. The City of Santa Monica, the local sponsor, expressed support for the project in December 1993 and is aware of project cost-sharing requirements.

In accordance with the cost-sharing and financing concepts reflected in the Water Resources Development Act of 1986, local interests will be required to provide lands, easements, rights-of-way, and dredged material disposal areas if necessary in the construction of the project; modify or relocate utilities, roads, bridges, (except railroad bridges), and other facilities, where necessary for the construction of the project; for commercial navigation pay 10 percent of the costs of construction of the portion of the project which has a depth not in excess of 20 feet; plus 25 percentt of the portion which has a depth in excess of 20 feet but not in excess of 45 feet; pay 10 percent of the costs allocated to general navigation within a period of 30 years following completion (if not offset by a credit allowed for lands, easements, rights-of-way, relocations, and dredged material disposal areas); and pay 35 percent of the cost allocated to storm damage reduction.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NAVIGATION - Santa Monica Breakwater (Cont'd)					
TOTAL NAVIGATION	6,340,000	3,167,000	779,000	2,169,000	. 225,000

Fiscal Year 1995 funds are being used to initiate preconstruction engineering and design. Fiscal Year 1996 will be used to complete preconstruction engineering and design in August 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $

b. Flood Control: The amount of $4,487,000 is requested to continue two PED activities and complete three PED actives in Fiscal Year 1996.

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - FLOOD CONTROL

California

American River Watershed	19,200,000	8,962,000	2,099,000	3,000,000	5,139,000

The American River Watershed drains about 2,100 square miles of mostly mountainous area along the westward face of the Sierra Nevada in northern California counties of Placer, El Dorado and Sacramento. It is comprised of three principal streams which are the North Fork, Middle Fork, and South Fork of the American River that flow generally westward into Folsom Lake, through the city of Sacramento and into the Sacramento River. Folsom Lake and levees along the lower American River, Sacramento River, and tributary streams and channels provide flood protection to the highly urbanized Sacramento area. Potentially flooded areas during rare flood events could have an impact on approximately 400,000 people, and an estimated $38 billion in property value. Recent evaluations indicate that the level of flood protection along much of the American River and in the Natomas area is less than the 100-year level. The February 1986 storms filled Folsom Lake and necessitated record releases in excess of design flows downstream. Because of the significant threat, 500 people were put on "levee watch" as these record flows passed through the city of Sacramento. Due to the 1986 storms, an extensive flood fighting effort was made by the Corps at a cost of $3 million and an additional $10 million was required for post flood repair work. This project will provide increased flood protection for the study area. The Division Engineer's notice for the American River Watershed Investigation cost shared feasibility study was issued in February 1992. The plan of improvement recommended in the feasibility report provides 200-year level of flood protection including a peak flow control dam in the vicinity of River Mile 20.1 near Auburn, levee improvements around the perimeter of the Natomas Basin, and a 300 acre detention area in North Natomas. Recreation trails are also included. The currently recommended plan is estimated to cost $871 million, and would have a benefit-cost ratio of 3.0 to 1 at 8 percent based upon the latest economic analysis dated February 1992. The average annual benefits amount to $178.5 million ($176.8 million for flood control and $1.7 million for recreation). The State of California and the Sacramento Area Flood Control Agency have stated their intention to be the non-Federal sponsors for the flood control portion of the project. The City and County of Sacramento will be the non-Federal sponsors for the recreation portion of the project. The Defense Appropriations Act for Fiscal Year 1993 authorized construction of the Natomas feature but directed the Corps to reevaluate findings of the American River Watershed Investigation feasibility study. Levee improvements authorized by the Defense Appropriations Act are being designed and constructed by the local sponsor. In accordance with the Act, a Supplemental Information Report is being prepared which will include information on gating and expandability of the flood control dam and a special evaluation of other features and operation procedures that should be implemented in a coordinated plan to provide flood protection sufficiently high for a major urban area subject to risk of frequent floods. Also in accordance with the Act, a flood management plan is being developed jointly by the Secretaries of the Army and Interior that insures prompt, reliable and full utilization of the flood control capability at Folsom Dam and other existing water resources development projects located in the American River watershed.

In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, local interests are required to provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas; modify or relocate buildings, utilities, roads, bridges (except railroad bridges), and other facilities where necessary in the construction of the project; pay a minimum of five percent in cash of the costs allocated to flood control; contribute an additional amount in cash as necessary to bring the non-Federal share of costs allocated to flood control to at least 25 percent; bear all costs of operation, maintenance, repair, rehabilitation, and replacement of flood control facilities; and pay one-half of the separable costs allocated to recreation, and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of recreation facilities.

Fiscal Year 1995 funds are being used to continue review of the locally designed levee improvements for the Natomas feature of the project, as well as inspection of local construction of those improvements; continue work on the Flood Management Plan, including environmental documents and the Decision Document; and continue work activities for preparation of the Supplemental Information Report as directed in the Defense Appropriations Act. Fiscal Year 1996 funds will be used to continue design review and inspection of levee construction of Natomas; complete the Decision Document of the Flood Management Plan as directed in the Defense Appropriations Act; complete the Supplemental Information Report; and, with approval, proceed with design activities for the selected plan identified in the Supplemental Information Report. A completion date is being determined for this preconstruction engineering and design effort.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - FLOOD CONTROL					
Napa River	11,200,000	9,513,000	900,000	787,000	0

The project is located in the city and county of Napa, California. The Napa River Basin, comprising 426 square miles ranging from tidal marshes to mountainous terrain, is subject to severe winter storms and frequent flooding. In the lower reach of the river, flood conditions are aggravated by high tides and local runoff. Floods in the Napa area have occurred in 1955, 1958, 1963, 1965, and 1986 (flood of record). Damages during the February 1986 flood amounted to over $100 million and the flood forced the emergency evacuation of approximately 5,000 residents. Almost all of these damages would have been prevented by the project. The December 1955 flood inundated 4,900 acres within the project area. The population in the city of Napa, approximately 66,000 in 1994, is expected to exceed 77,000 persons by the year 2000. Excluding public facilities, the present value of damageable property within the project floodplain is over $500 million. The project will protect human life and reduce flood damage to residential, industrial and agricultural property. The previously approved flood control plan included 11 miles of enlarged channels, levees, and floodwalls, and recreation facilities along Napa River and would provide a high level of protection. However, the local sponsor, Napa County Flood Control and Water Conservation District has expressed interest in developing a reduced scope plan. The current plan is physically smaller than the survey report plan but still provides 100-year level of protection to the city of Napa from flooding on the Napa River and Napa Creek. The Napa River improvements consist of channel excavation, sheetpile walls, set-back floodwalls, set-back levees, a bypass channel, and related environmental mitigation measures. The recreation plan will consist of pedestrian/bike trails on project lands and would be sponsored by the City of Napa. Project improvements on Napa River would begin near Kennedy Park and extend upstream about 5.7 miles to Trancas Street. Napa Creek improvements will consist of 2,600 feet of channel excavation and streambank protection within the authorized reach, which extends from the confluence of Napa Creek and Napa River upstream approximately 4,200 feet to Jefferson Street. The recommended plan is currently estimated to cost about $130 million. The average annual benefits for flood control on Napa River and Napa Creek are estimated at $15,400,000; the average annual benefits for recreation on Napa River are estimated at $300,000. The benefit-cost ratio is 1.5 to 1 at 8 percent based on the latest economic analysis dated March 1993.

The project was authorized for construction by the Flood Control Act of 1965. Authorization was modified by The Flood Control Act of 1976 to include Napa Creek improvements. In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, local interests will be required to provide all lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas; modify or relocate buildings, utilities, roads, bridges (except railroad bridges), and other facilities where necessary in the construction of the project; pay 5 percent of the costs allocated to flood control; and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of flood control facilities. The local sponsor's share of flood control project costs is expected to exceed 50 percent of the total project costs. Subsequent to completion of the project and determination of final project costs, the local sponsor will be reimbursed for one-half of the non-Federal costs allocated to flood control in excess of Federal construction costs. The local sponsor would also pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.

Fiscal Year 1995 funds are being used to continue preconstruction engineering and design. Fiscal Year 1996 funds will be used to complete preconstruction engineering and design in September 1996.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - FLOOD CONTROL					
Pajaro River at Watsonville	1,650,000	0	500,000	500,000	650,000

The study area is located in the city of Watsonville and vicinity, about 100 miles south of San Francisco, California. The city of Watsonville has experienced continued flooding from the Pajaro River and from its tributaries, Corralitos and Salsipuedes Creeks. The construction of levees to provide a 50-year level of flood protection was completed by the Corps of Engineers in June 1949. Project improvements included about 11.8 miles of levee construction on Pajaro River and 2.4 miles on Corralitos Creek. Subsequent to the construction of the original project, two major floods nearly exceeded the capacity of the project. As a result, additional studies were authorized which identified a feasible project. The project, authorized in November 1966, was designed to provide a high level of flood protection to the area. However, during advanced engineering studies, the local sponsor was unable to support any of the alternatives being proposed, and the project was placed in a deferred status. Due to increased flooding upstream of the existing project in the early 1980's, the local sponsor renewed its support for additional studies of the flood problems in the area. The existing project now provides less than a 20-year level of flood protection along the Pajaro River due to changes in basin hydrology. The recommended project, estimated to cost $13.5 million with an estimated Federal cost of $10.1 million and an estimated non-Federal cost of $3.4 million, includes construction of floodwalls and/or levees along Salsipuedes and Corralitos Creeks which will provide a 47-year level of protection. The average annual benefits amount to $2,530,000, all flood control. The benefit-cost ratio is 2.2 to 1 at 8 percent based on the latest economic analysis dated November 1993. The Counties of Santa Cruz and Monterey, the local sponsors, expressed support for the study in May 1993, and are aware of project cost sharing requirements.

In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, local interests will be required to provide lands, easements, rights-of-way, and dredged material disposal areas; modify or relocate buildings, utilities, roads, bridges, (except railroad bridges), and other facilities, where necessary in the construction of the project; pay five percent of the costs allocated for flood control; contribute an additional amount in cash as necessary to bring the non-Federal share of costs allocated to flood control to 25 percent; and bear all costs of operation, maintenance, and replacement of flood control facilities.

FLOOD CONTROL - Pajaro River at Watsonville (Cont'd)

Fiscal Year 1995 funds are being used to initiate preconstruction engineering and design. Fiscal Year 1996 funds will be used to continue preconstruction engineering and design for which the completion date is being determined.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - FLOOD CONTROL					
San Lorenzo River	1,000,000	291,000	609,000	100,000	0

The project area is located within the city limits of Santa Cruz, California about 70 miles south of San Francisco. It includes the lower 2.5 miles of the San Lorenzo River which terminates at the Pacific Ocean. The river flows through a highly developed business, industrial and residential area with a January 1994 population of 51,700. Extensive flooding occurred in 1955 which inundated 410 acres and caused damages in excess of $50 million (1993 prices). As a result, a flood control project, including levee and channel improvements, was constructed and completed in 1959 by the Corps of Engineers. Excessive sediment deposition in the streambed has reduced the carrying capacity of the existing flood control project to about a 30-year event as compared to the design capacity of about a 150-year event. The recommended project will provide a 70-year level of flood protection, and is estimated to cost $17.9 million with an estimated Federal cost of $9.0 million and an estimated non-Federal cost of $8.9 million. This plan includes floodwalls which will be constructed at the crest of existing project levees on both sides of the San Lorenzo River from the Southern Pacific Railroad bridge to State Highway 1 bridge, bridge modifications to increase flow capacity at Soquel Avenue and Water Street bridges, dredging, toe drains, floodproofing and flood warning system. Average annual benefits amount to $2.2 million, all flood control. The benefit-cost ratio is 1.3 to 1 at 8 percent based on the latest economic analysis at October 1993 price levels. The project is not yet authorized for construction. The City of Santa Cruz, the local sponsor, expressed support for the project in January 1994 and is aware of project cost sharing requirements.

In accordance with cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, local interests will be required to provide lands, easements, rights-of-way and borrow and excavated or dredged material disposal areas modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities where necessary in the construction of the project; pay five percent of the costs allocated to flood control; pay 25 percent of the costs associated with nonstructural flood control measures included in the project; and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities. The sponsor will also be required to perform annual maintenance dredging. Subsequent to completion of the project and determination of final project costs, the local sponsor will be reimbursed for one-half of the non-Federal cost allocated to flood control in excess of Federal construction costs.

Fiscal Year 1995 funds are being used to continue preconstruction engineering and design. Fiscal Year 1996 funds will be used to complete preconstruction engineering and design in September 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - FLOOD CONTROL					
Utah					
Upper Jordan River	1,600,000	1,150,000	350,000	100,000	0

The project is located in Salt Lake County, Utah, just south of Salt Lake City. The drainage area includes a portion of the Western Slope of the Wasatch Mountains, Bench and Valley Lands Tributary to Mill Creek. Mill Creek is Tributary to the Upper Jordan River. There has been a long history of flooding which is most commonly associated with snowmelt runoff; however, flooding has also occurred from summer thunderstorms, general rainstorms, and from a combination of snowmelt and rainfall. The most recent flooding occurred in 1982, 1983, and 1984. Damages to highly developed residential, commercial and public infrastructure in 1982 amounted to approximately $4 million. The most severe and extensive snowmelt in the history of Utah occurred during the spring of 1983. Damages from Mill Creek alone were estimated at $5.5 million and damages for the entire Jordan River Basin exceeded $40 million. Damage information from the 1982 rain flood suggests that rainfall flooding along the tributary streams is being aggravated by urban development. A feasibility report was completed in Fiscal Year 1987. The recommended project, estimated to cost $13.3 million includes construction of a flood control diversion and sediment control structure on Mill Creek, a 1.4 mile underground conduit (96-inch diameter) from the diversion structure to a detention basin south of Mill Creek and construction of the 100 acre foot Hillview Detention Basin. The project will divert flood flows from Mill Creek to the detention basin and ultimately into Big Cottonwood Creek and the Upper Jordan River. This plan provides for nearly 100-year flood protection on Mill Creek above State Street. The average annual benefits amount to $3,756,000 (October 1992 price levels), all flood control. The benefit-cost ratio is 2.9 to 1 at 8 percent. Salt Lake County, the local sponsor, expressed support for the project in July 1994, and is aware of project cost sharing requirements.

The project was authorized for construction by the Water Resources Development Act of 1990. In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, local interests will be required to provide lands, easements, and rights-of-way and borrow and excavated or dredged material disposal areas, modify or relocate, utilities, roads, bridges (except railroad bridges), and other facilities where necessary in the construction of the project, pay 5 percent of the costs allocated to flood control, and bear all costs of operation, maintenance, repair rehabilitation and replacement of flood control facilities.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $

FLOOD CONTROL - Upper Jordan River (Cont'd)

The study was last budgeted for preconstruction engineering and design in Fiscal Year 1992. Since that time, design has proceeded utilizing carryover funds. Fiscal Year 1995 funds are being used to continue preconstruction engineering and design including initiation of plans and specifications. Fiscal Year 1996 funds will be used to complete preconstruction engineering and design in September 1996.

TOTAL FLOOD CONTROL	34,650,000	19,916,000	4,458,000	4,487,000	5,789,000

C. Shoreline Protection: The amount of $250,000 is requested to complete one PED activity in Fiscal Year 1996.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING - SHORELINE PROTECTION					
San Rafael Canal	2,110,000	1,168,000	692,000	250,000	0

The project area is located in the city of San Rafael, California, about 17 miles north of San Francisco. San Rafael Canal provides the outlet for San Rafael Creek into San Francisco Bay and also provides access for small-craft to upstream harbors. The Canal is surrounded by San Rafael's central business district and dense residential areas. The estimated current value of the approximately 1,060 properties subject to flooding in the 500-year floodplain is $260 million. In January 1982, storm runoff from the creek, combined with high tides on the Bay and strong easterly winds, caused overtopping of the Canal and extensive flooding of surrounding commercial and residential properties. Damages attributed to this event were approximately $20 million under conditions and prices at that time. Plans of improvement which have been evaluated include construction of either a tide barrier structure upstream of the mouth of the Canal with bypass pumps or the building of a floodwall along the Canal's bank as a viable means to protect against flooding. The feasibility report was completed September 1992. The recommended project, estimated to cost $29.4 million with an estimated Federal cost of $19.1 million and an estimated non-Federal cost of $10.3 million includes construction of the floodwall alternative which will provide a 100-year level of protection. The average annual benefits for the proposed project are estimated at $4,838,000, all shoreline protection. The benefit-cost ratio is 2.0 at 8 percent based on the latest economic analysis dated December 1993. The project is not yet authorized for construction. The City of San Rafael, the local sponsor, expressed support for the project in November 1992 and is aware of project cost sharing requirements.

In accordance with cost sharing and financing concepts reflected in the Water Resource Development Act of 1986, local interests will be required to provide lands, easements, and rights-of-way and dredged material disposal areas; modify or relocate buildings, utilities, roads, bridges (except railroad bridges), and other facilities where necessary for the construction of the project; contribute an additional amount in cash as necessary to bring the non-Federal share of costs allocated to storm damage reduction to 35 percent; bear all costs of operation, maintenance, and replacement of storm damage protection facilities and the mitigation area.

Fiscal Year 1995 funds are being used to continue preconstruction engineering and design. Fiscal Year 1996 funds will be used to complete preconstruction engineering and design in December 1995.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 South Pacific Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
TOTAL SHORELINE PROTECTION	2,110,000	1,168,000	692,000	250,000	0
d. Multilpe Purpose Power: None					
TOTAL PRECONSTRUCTION ENGINEERING AND DESIGN ACTIVITIES, CONTINUING	43,100,000	24,251,000	5,929,000	6,906,000	6,014,000
TOTAL PRECONSTRUCTION ENGINEERING AND DESIGN ACTIVITIES	43,100,000	24,251,000	5,929,000	6,906,000	6,014,000
GRAND TOTAL - SURVEYS AND PRECONSTRUCTION ENGINEERING AND DESIGN ACTIVITIES	101,795,000	49,094,000	15,219,000	17,856,000	19,626,000

APPROPRIATION TITLE: Construction, General - Navigation (Channel and Harbors)

PROJECT: Los Angeles Harbor, California (New)

LOCATION: Los Angeles Harbor is located on the coast of southern California in San Pedro Bay, about 25 miles south of downtown Los Angeles, and adjacent to the city of Long Beach.

DESCRIPTION: The project consists of four increments of dredging, deepening the existing entrance channel, and providing new channels to existing and new port facilities. The dredge material will be used for fill to create Pier 400. Mitigation will include a new shallow water habitat within the harbor and other biological mitigation measures along the coast of California.

AUTHORIZATION: Water Resources Development Acts of 1986, 1988 and 1990.

REMAINING BENEFIT-REMAINING COST RATIO: 2.1 to 1 at 8 percent

TOTAL BENEFIT-COST RATIO: 2.1 to 1 at 8 percent

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available reevaluation in the Supplemental Information Report to the Final Feasibility Report dated August 1993, at October 1993 price levels.

SUMMARIZED FINANCIAL DATA			ACCUMULATED PCT OF EST FED COST	STATUS (1 JAN 95)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$101,000,000		Entire Project	Not Started	Being Determined
Corps of Engineers		100,700,000				
Department of Transportation (USCG)		300,000				
Estimated Non-Federal Cost		300,000,000				
Cash Contributions	$245,278,000					
Other Costs	54,722,000					
Total Estimated Project Cost		$401,000,000				

South Pacific Division Los Angeles District Los Angeles Harbor, California

			ACCUMULATED PCT OF EST FED COST
Allocations to 30 September 1994	$3,726,000		
Conference Allowance for FY 1995	1,674,000		
Allocation for FY 1995	904,000	1/	
Allocations through FY 1995	4,630,000	2/	5
Allocation Requested for FY 1996	100,000		5
Programmed Balance to Complete after FY 1996	$95,970,000		
Unprogrammed Balance to Complete after FY 1996	0		

1/ Reflects $270,000 reduction for savings and slippage and $500,000 reprogrammed from the project.

2/ Reflects $500,000 in programmed carryover into FY 1996.

PHYSICAL DATA

Increment 2: Entrance Channel Dredging
  Dredge entrance channel to 63 feet
  Create 168 acres of new Pier 400 land and causeway
  Restore 158 acres of tidal lagoon near Carlsbad
  Create 91 acres of shallow water habitat at breakwater near Angel's Crate

Increment 3: Main and South Channel
  Dredge main entrance channel to 81 feet; south channel to 75 feet
  Create 354 acres of new Pier 400 land
  Restore 225 acres of tidal lagoon near Carlsbad
  Restore 126 acres of tidal wetlands at Ballona Creek or equivalent

Increment 4: North Channel Dredging
Dredge 3,700 linear feet of north channel to 45 feet
Create 55 acres of new Pier 400 land
Restore 45 acres of tidal wetlands at Ballona Creek or equivalent

Increment 5: North Channel Extension
  Extend north channel 2,500 linear feet at 45-foot-depth
  Create 22 acres of new Pier 400 land
  Restore 22 acres of tidal wetlands at Ballona Creek or equivalent

JUSTIFICATION: Los Angeles and Long Beach Harbors serve the entire Pacific Southwest, and goods pass through the ports to or from all 50 states. Population of the tributary area has increased from 10.7 million in 1960 to over 25.4 million in 1990, and is expected to increase to 34.5 million by the year 2000. Cargo throughput in the Los Angeles-Long Beach Harbors is estimated to increase from the 92.2 million tons in 1992 to over 260 million tons by the year 2020. The outer harbors have need for greater depths to support present and future fleets of tanker and bulk vessels. There is a potential deficiency in onshore facilities, depths of channels, and available land resources to accommodate cargo projections to the year 2020. The Port of Long Beach withdrew from the feasibility study process in October 1991 and will construct project increment 1 without Federal funding. The Federal project will include project increments 2 through 5 for the Port of Los Angeles. Average annual benefits, all commercial navigation, are $99,396,000 at October 1993 price levels.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $100,000 and $500,000 (Preconstruction Engineering and Design), respectively, will be applied as follows:

Complete Engineering and Design, Increment 3 & 5, and execute Project Cooperation Agreement	$600,000
Total	$600,000

NON-FEDERAL COST: In accordance with the cost-sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights-of-ways, and borrow and excavated or dredged material disposal areas.	$ 54,722,000	$
Pay 60 percent of the costs allocated to general navigation facilities during construction and pay 50 percent of the costs of incremental maintenance below 45 feet below mean low water.	215,278,000	551,000
Reimburse an additional 10 percent of the costs of general navigation features allocated to commercial navigation within a period of 30 years following completion of construction, as partially reduced by a credit allowed for the value of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal area provided for commercial navigation.	30,000,000	
Total Non-Federal Costs	$ 300,000,000	$ 551,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction and reimburse its share of construction costs within a period of 30 years following completion of construction.

STATUS OF LOCAL COOPERATION: The Los Angeles Harbor Department has indicated its support for the recommended plan and its willingness and intent to execute the Project Cooperation Agreement (PCA). The PCA will define how credit for advance construction of Increments 2 and 4 performed by the local sponsor will be applied toward the Federal construction of Increments 3 and 5, per Section 4(d) of the Water Resources Development Act of 1988 and Section 102 of the Water Resources Development Act of 1990. A Project Cooperation Agreement is scheduled to be executed in November 1995.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $101,000,000 is a decrease of $17,100,000 from the latest estimate ($118,100,000) presented to Congress (FY 1995). This decrease is due to recalculation of the Federal share of the recommended project based on the NED plan.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Impact Statement was filed on 21 January 1994.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1990 but were not allocated until FY 1993 upon completion of the feasibility phase with the District Engineer Notice 30 September 1992.

Port of Los Angeles will initiate construction of Increments 2 and 4 in August 1994. Construction will take 3 years. The Corps is preparing plans and specifications during the Port's construction. Construction of Increments 3 and 5 will commence after completion of Port's construction. FY 1996 construction start meets commitments to sponsor to share in the construction.

APPROPRIATION TITLE: Construction, General - Navigation (Channel and Harbors)

PROJECT: Morro Bay Harbor, California (Continuing)

LOCATION: Morro Bay Harbor is located in San Luis Obispo County, California, about 13 miles northwest of the city of San Luis Obispo, about midway between Los Angeles and San Francisco.

DESCRIPTION: The project consists of modifications to the existing harbor and includes extending, deepening and widening the entrance channel.

AUTHORIZATION: Water Resources Development Act of 1992.

REMAINING BENEFIT-REMAINING COST RATIO: 2.0 to 1 at 8-1/2 percent

TOTAL BENEFIT-COST RATIO: 2.0 to 1 at 8-1/2 percent

INITIAL BENEFIT COST RATIO: 1.3 to 1 at 8-1/2 percent (FY 94).

BASIS OF BENEFIT-COST RATIO: Benefits are from the Limited Re-evaluation Report dated October 1993, at October 1993 price levels.

SUMMARIZED FINANCIAL DATA			ACCUMULATED PCT OF EST FED COST
Estimated Federal Cost		$2,200,000	
Estimated Non-Federal Cost		400,000	
Cash Contributions	$500,000		
Less Credit Reimbursement	(100,000)		
Total Estimated Project Cost		$2,600,000	

STATUS (1 JAN 95)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	Not Started	Nov 1995

PHYSICAL DATA

Entrance Channel Extension:
Dredge seaward of entrance to 40-foot depth
Dredge entrance and sand trap landward to 30-foot depth

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		ACCUMULATED PCT OF EST FED COST	
Allocations to 30 September 1994	$ 776,000		
Conference Allowance for FY 1995	1,300,000		
Allocation for FY 1995	1,300,000	1/	1/ Reflects $206,000 reducticn assigned as savings and slippage and $206,000 reprogrammed to the project.
Allocations through FY 1995	2,076,000	89	
Allocation Requested for FY 1996	124,000	100	
Programmed Balance to Complete after FY 1996	0		
Unprogrammed Balance to Complete after FY 1996	0		

JUSTIFICATION: Morro Bay Harbor is used as a home port for about 181 commercial fishing vessels, 15 sport fishing vessels, and 400 pleasure craft. In addition, approximately 200 commercial fishing vessels based at other ports land fish at Morro Bay Harbor during the fishing season. This fleet provides major benefits to the local community which depends, to a large extent, on the fishing industry. Four canneries are located in Morro Bay employing approximately 350 people. Commercial fishing vessels landed 8 million pounds of fish valued at $4.8 million in 1992. Severe storms in 1982 and 1983 damaged both the north and south breakwaters. The total cost of repairs was approximately $1.5 million. Continual steep and breaking waves create extremely hazardous navigation conditions at the entrance, effectively closing Morro Bay an average of almost 50 days a year. An incident occurred in February 1993 in which four passengers were tossed off of an excursion boat; nine passengers were treated at local hospitals for injuries. All passengers were saved. Average annual benefits, at October 1993 price levels, are as follows:

Annual Benefits	Amount
Navigation	
General Commercial	
Navigation Safety	$102,000
Commercial Fishing	496,000
Total	$598,000

FISCAL YEAR 1996: The requested amount will be applied as follows:

Complete construction	$100,000
Planning, Engineering and Design	6,000
Construction Management	18,000
Total	$124,000

NON-FEDERAL COST: In accordance with the cost-sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights-of-ways, and borrow and excavated or dredging disposal areas. (Requirement under sponsor's ownership.)	-$100,000	$
Pay 20 percent of cost allocated to general navigation facilities during construction.	500,000	0
Total Non-Federal Costs	$400,000	$ 0

STATUS OF LOCAL COOPERATION: By letter dated 1 August 1991, the City of Morro Bay indicated its support for the recommended plan and its willingness and intent to execute the Project Cooperation Agreement. The City of Morro Bay states its financial cspability to provide costs with funds on hand and from the Morro Bay Harbor Reserve. The Project Cooperation Agreement is scheduled to be executed 28 February 1995.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $2,200,000 is an increase of $100,000 from the last estimate presented to Congress (FY 1995). This increase is due to estimating adjustments.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Supplemental Environmental Assessment (EA) was completed in January 1994 along with the Final Design Memorandum.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1992, and funds to initiate construction were appropriated in FY 1994. Project construction is scheduled in conjunction with Operation and Maintenance dredging, within the environmental window of August through October 1995. The construction contract is scheduled for award in July 1995.

APPROPRIATION TITLE: Construction, General - Channels and Harbors (Navigation)

PROJECT: Oakland Harbor, California (Continuing)

LOCATION: Oakland Harbor is located in the City of Oakland, California, on the eastern shore of central San Francisco Bay immediately south of the San Francisco-Oakland Bay Bridge.

DESCRIPTION: The authorized project consists of deepening of the 4 mile Inner Harbor and the 3.4 mile Outer Harbor channels to 42 feet and widening the entrance channel to 1,000 feet; relocation of the Outer Harbor turning basin 3,000 feet westward; and widening the turning basin to 1,800 feet and constructing a 1,200-foot turning basin in the Inner Harbor, 42 feet deep, at mile 3.7. As an interim measure prior to deepening the entire project to a 42 feet, a limited portion of the Inner Harbor from the entrance to the Howard terminal was deepened to 38 feet.

AUTHORIZATION: Water Resources Development Act of 1986.

REMAINING BENEFIT - REMAINING COST RATIO: 14.7 to 1 at 8 5/8 percent

TOTAL BENEFIT - COST RATIO: 13.8 to 1 at 8 5/8 percent

INITIAL BENEFIT - COST RATIO: 3.0 to 1 at 8 5/8 percent (FY 1987)

BASIS OF BENEFIT - COST RATIO: Benefits are from the latest available evaluation (General Design Memorandum) dated June 1994 at December 1993 price levels.

SUMMARIZED FINANCIAL DATA

Estimated Appropriation Requirement (COE)		$ 89,235,000
38-foot portion	$ 879,000	
42-foot portion	$88,356,000	
Estimated Appropriation Requirement (USCG)		125,000
Estimated Total Appropriation Requirement		89,360,000
Future Non-Federal Reimbursement		11,910,000
38-foot portion	$ 0	
42-foot portion	$11,910,000	
Estimated Federal Cost (Ultimate)		77,450,000

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Deepen 38 foot portion	100	December 1992
Entire Project	8	April 1997

PHYSICAL DATA

Channels:	Deepening the 4 mile Inner Harbor and 3.4 mile Outer Harbor channel to 42 ft. Widen the Entrance channel to 1,000 ft.
Turning Basin	Widen Outer Harbor turning basin and deepen to 42 ft. Construct 1,200 ft. turning basin in Inner Harbor 42 ft. deep, at mile 3.7

Division: South Pacific

District: San Francisco

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SUMMARIZED FINANCIAL DATA (Continued)

				ACCUM PCT. OF EST. FED. COST
Estimated Non-Federal Cost			41,700,000	
Cash Contribution		$29,790,000		
38-foot portion	$ 853,000			
42-foot portion	$ 28,937,000			
Other Costs		0		
Reimbursements		11,910,000		
38-foot portion	$ 0			
42-foot portion	$ 11,910,000			
Total Estimated Project Cost			119,150,000	
38-foot portion	$ 3,053,000			
42-foot portion	$116,097,000			
Allocations to 30 September 1994			22,146,000	
Conference Allowance for FY 1995			35,000,000	
Allocation for FY 1995			16,023,000 1/	
Allocation through FY 1995			38,169,000	43
Allocation Requested for FY 1996			14,000,000	58
Programmed Balance to Complete after FY 1996			37,066,000	
Unprogrammed Balance to Complete after FY 1996			0	

1/ Reflects $5,540,000 reduction for savings and slippage, $13,437,000 reprogrammed from the project, and $1,900,000 in programmed carryover into FY 1996.

JUSTIFICATION: The Port of Oakland services about 85 percent of all general cargo moving through the Golden Gate, 95 percent of which is containerized. The existing Federal navigation channel serving Oakland Harbor is inadequate for efficient shipping operations and vessel safety as a result of increased vessel traffic and larger containerships. Cargo movement by larger vessels is hampered by the need to load to less than full capacity and to wait for high tides to avoid grounding hazards. Annual tonnage handled by this project amounted to approximately 10 million tons in 1990. The Port terminals are considered to be state-of-the art. The plan of improvement will provide for further development of the harbors to accommodate the new generation of containerships, improve safety of vessel traffic and provide maximum efficiency of port operations. The majority of ships presently using the port have design drafts greater than 35 feet. Limited deepening of the Inner Harbor portion of the project to 38 feet was completed in December 1992. Vessels may

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now depart the Port with some additional cargo, but must still arrive light-loaded. The remainder of the project is needed to allow safe and efficient utilization of the port. Average annual benefits, all commercial navigation, are estimated at $144,911,000 based at December 1993 prices. The 38 foot deepening completed in December 1992 resulted in realization of an estimated $1,026,000 in annual benefits.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $14,000,000 and $1,900,000, respectively, will be applied as follows:

Initiate & Complete Navy Sewer Line Relocation	$ 720,000
Continue Harbor Deepening to 42 feet	14,790,000
Planning, Engineering, and Design	145,000
Construction Management	245,000
Total	$15,900,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursement	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Pay 25 percent of the costs allocated to navigation during construction. 38-foot portion $ 853,000 42-foot portion $28,937,000	$29,790,000	$800,000
Pay an additional 10 percent plus interest of the costs allocated to navigation within a period of 30 years following completion of construction. 38-foot portion $ 0 42-foot portion $11,910,000	11,910,000	N/A
Total Non-Federal Costs	$41,700,000	$800,000

STATUS OF LOCAL COOPERATION: The local sponsor, the Port of Oakland, has contributed their share of PED and construction for the 38 feet deepening in the Inner Harbor, assured support for the total project and requested the Corps to proceed with the implementation of the authorized project. The Project Cooperation Agreement (PCA) for the remaining 42-foot portion of the project was signed in December 1994.

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COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $89,235,000 is the same as the latest estimate presented to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Supplement one to the Environmental Impact Statement (EIS) was filed in March 1988. The second Supplemental EIS was filed in July 1994.

OTHER INFORMATION: Funds were appropriated to initiate preconstruction planning in FY 1984 and to initiate construction in FY 1987. Construction of the total project could not start because of objections by Federal and state agencies and local environmental groups to the existing disposal site and because of the non-availability of a new dredged material disposal site. Studies have been completed for new disposal sites. The supplemental EIS addressed new upland, wetland creation, in-bay and ocean disposal sites. The scheduled completion date of April 1997 for programmed work is the same as the latest completion date presented to Congress (FY 1995).

The current cost estimate for the authorized project is based on disposal of dredged material at a section 102 ocean disposal site, approximately 50 miles west of the Golden Gate Bridge, at a required upland disposal site, and at the wetland creation site at Sonoma Baylands. Based on the favorable bids received for the contract awarded 16 December 1994 to deepen the project to 42 feet, we expect to reduce the estimated cost to complete the project. We will report the changes as soon as a reanalysis is completed.

Designation of a general purpose Section 102 ocean disposal site and criteria for in-bay and upland dredged sediment disposal are being pursued as part of the San Francisco Bay Long Term Management Strategy (LTMS). The LTMS study program includes participation by the Corps of Engineers, Environmental Protection Agency (EPA) Region IX, the State of California, the US Navy and other navigation interests. The entire study effort is being integrated by the Corps of Engineers. The Section 102 ocean site was designated in September 1994. The Oakland Harbor project is sensitive to dredged material disposal requirements developed by the LTMS, including incorporation into the EIS and General Design Memorandum.

The current plan is based on placement of some of the dredged material at Sonoma Baylands, a Federally authorized wetlands creation project. The incremental cost of using Sonoma Baylands will be cost-shared by the State of California Coastal Conservancy.

APPROPRIATION TITLE: Construction, General - Channels and Harbors (Navigation)

PROJECT: Richmond Harbor, California (Continuing)

LOCATION: The project is located in the northeastern section of San Francisco Bay, in the City of Richmond, Contra Costa County, California.

DESCRIPTION: Deepen existing 4.5 miles of channel between the Richmond Long Wharf and Santa Fe Channel from 35 feet to 38 feet, and construct a turning basin 1,200 feet in diameter to a depth of 38 feet. The project was authorized to a depth of 41 feet; however, that depth is not currently required. (See OTHER INFORMATION.)

AUTHORIZATION: Supplemental Appropriations Act, 1985 and the Water Resources Development Act of 1986

REMAINING BENEFIT-REMAINING COST RATIO: 2.3 to 1 at 8 7/8 percent

TOTAL BENEFIT-COST RATIO: 1.8 to 1 at 8 7/8 percent

INITIAL BENEFIT-COST RATIO: 3.0 to 1 at 8 7/8 percent (FY 1988)

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation (Draft General Design Memorandum) dated September 1987, as modified by the FY 1988 second new start submission, at October 1987 price levels.

SUMMARIZED FINANCIAL DATA		STATUS: (1 Jan 95)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Appropriation Requirement (COE)	$25,750,000	Entire Project	Not Started	February 1997
Estimated Appropriation Requirement (USCG)	50,000		PHYSICAL DATA	
Estimated Total Appropriation Requirement	25,800,000	Channel:	Deepen 4.5 miles of existing 35 foot channel to 38 feet.	
Future Non-Federal Reimbursement	3,300,000			
Estimated Federal Cost (Ultimate)	22,500,000	Turning Basin:	Provide turning basin at Point Potrero, 38 feet deep and 1,200 feet in diameter.	

				ACCUM. PCT. OF EST. FED. COST.
Estimated Non-Federal Cost			$10,550,000	
Cash Contribution	$7,250,000			
Other Costs	0			
Reimbursements	3,300,000			
Commercial Navigation		3,300,000		
Total Estimated Project Cost			33,050,000	
Allocations to 30 September 1994			7,278,832	
Conference Allowance for FY 1995			600,000	
Allocation for FY 1995			600,000 1/	
Allocations through FY 1995			7,878,832	31
Allocation Requested for FY 1996			3,296,000	43
Programmed Balance to Complete after FY 1996			14,575,168	
Unprogrammed Balance to Complete after FY 1996			0	

1/ Reflects $95,000 reduction assigned as savings and slippage and $95,000 reprogrammed to the project.

JUSTIFICATION: Bulk cargo at the Port of Richmond increased more than 50 percent in five years, from 2,000,000 tons in 1985 to 3,000,000 tons in 1990. Commodities shipped consist of scrap metal, steel products, metal ores, gypsum products, chemicals, vegetable oils and petrochemicals. The proposed channel improvements will permit more efficient vessel operations and improved navigation safety. The existing 35-foot channel contains sharp turns which are increasingly difficult for large vessels to navigate against strong winds, waves and currents, especially at night and under foggy conditions. As cargo tonnage grows and larger vessels are introduced, the inadequacy of the channel and the lack of a turning basin will increase light-loading and tidal delays as well as the hazard of grounding. The project is designed to facilitate continued growth of the port as a major center of bulk shipments by deepening the present 35-foot channel to 38 feet MLLW and provide a new turning basin for bulk carriers. Average annual benefits, all commercial navigation, are estimated to be $4,700,000 at 1 October 1987 price levels, from transportation cost savings gained by fuller loading, the use of larger vessels, and reduction in tidal delays.

FISCAL YEAR 1996: The requested amount of $3,296,000 will be applied as follows:

Planning, Engineering and Design	$ 736,000
Initiate Construction	2,260,000
Construction Management	300,000
TOTAL	$ 3,296,000

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NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursement	Annual Operation, Maintenance, Repair Rehabilitation and Replacement Costs
Provide lands, easements, rights of way, and dredged material disposal areas.	$ 0	$314,000
Pay 10 percent of the costs to 20 feet below mean lower low water and 25 percent of costs between 20 and 45 feet below mean lower low water.	$ 7,250,000	
Reimburse an additional 10 percent of the costs allocated to general navigation facilities within a period of 30 years following completion of construction.	$ 3,300,000	
Total Non-Federal Costs	$10,550,000	$314,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction (and reimburse its additional 10% share of construction costs over 30 years).

STATUS OF LOCAL COOPERATION: By letter dated 19 March 1990, the City of Richmond reaffirmed its intent to sign a Project Cooperation Agreement in compliance with requirements of the Water Resources Development Act of 1986 for the project. The agreement is scheduled to be executed in December 1995.

In a letter dated 31 March 1989, the non-Federal sponsor indicated that it is financially capable and willing to contribute the non-Federal share. Project support strongly reaffirmed in a letter dated 19 March 1990 to ASA(CW). Our analysis of the non-federal sponsor's financial capability to participate in the project is affirmed by the sponsor's establishment of a Harbor Navigation Improvement District which would enable the sponsor to finance the project.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $25,750,000 is the same as the latest estimate presented to Congress (FY 1995).

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STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The original Final Environmental Impact Statement (EIS) was filed on 21 May 1982. The Final Supplemental EIS is scheduled for September 1995.

OTHER INFORMATION: Funds to initiate Preconstruction Engineering and Design were appropriated in Fiscal Year 1985. Funds to initiate construction were initially provided in the Fiscal Year 1985 Supplemental Appropriations Act. However, design was not sufficiently advanced to permit execution of a Local Cooperation Agreement by 30 June 1986 as required by the Act and construction funding lapsed. Construction funds were again appropriated in Fiscal Year 1988 to continue preparation of the General Design Memorandum.

The Lauritzen Canal is a tributary of the Santa Fe Channel, which is part of the deepening project. A DDT chemical packaging facility which was in operation about 30 years ago contaminated the Lauritzen Canal. The Canal is now an Environmental Protection Agency (EPA) Superfund site. Contaminants have leached out into project channels, and this has impacted the deepening project schedule. The scheduled project completion date of February 1997 is a change from the latest completion date of June 1997 presented to Congress. This change is due to reevaluation of the superfund site boundries by EPA, additional ocean testing required due to this change, evaluation of pilot recommended turning basin changes and re-evaluation of the schedule based on actual times required for the Oakland Harbor project.

Staged construction was studied at the request of the local sponsor. The second stage of the project, deepening from 38 feet to 41 feet, was reclassified to the inactive category on 8 February 1988 because container traffic did not materialize as previously forecast and those associated costs have been deleted from the project cost estimate.

EPA's designation of a general purpose Section 102 ocean disposal site occured in August 1994 and criteria for in-bay and upland dredged sediment disposal are being pursued as part of the San Francisco Bay Long Term Management Strategy (LTMS). The LTMS study program includes participation by the Corps of Engineers, EPA Region IX, the State of California, the US Navy and other navigation interests. The entire study effort is being integrated by the Corps of Engineers. The Richmond Harbor project schedule is sensitive to dredged material disposal requirements developed by the LTMS, including incorporation into the EIS and General Design Memorandum.

APPROPRIATION TITLE: Construction, General - Channels and Harbors (Navigation)

PROJECT: Sacramento River Deep Water Ship Channel, California (Continuing)

LOCATION: The project is located on the Sacramento River between Collinsville and the Port of Sacramento, a distance of about 43 miles, in the counties of Sacramento, Contra Costa, Solano, and Yolo, California.

DESCRIPTION: The project will deepen the existing 30 foot deep ship channel to 35 feet, with selective widening. Fish and wildlife habitat mitigation will be constructed as well as salinity mitigation features, if required.

AUTHORIZATION: Supplemental Appropriations Act of 1985 and Water Resources Development Act of 1986.

REMAINING BENEFIT - REMAINING COST RATIO: 4.3 to 1 at 8-1/8 percent.

TOTAL BENEFIT-COST RATIO: 2.7 to 1 at 8-1/8 percent.

INITIAL BENEFIT-COST RATIO: 2.5 to 1 at 8-1/8 percent (FY 1985).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation in the General Design Memorandum, March 1986, approved in May 1987 at 1 Oct 1985 price levels.

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		$25,200,000
Corps of Engineers	$24,900,000	
United States Coast Guard	300,000	
Estimated Non-Federal Cost		24,800,000
Cash Contributions	8,300,000	
Other Costs	16,500,000	
Total Estimated Project Cost		50,000,000

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	32	Being Determined

PHYSICAL DATA

Channels:
Deepen existing 30 foot Sacramento Deep Water Ship Channel Collinsville to the Port of Sacramento to 35 feet with selective widening.

Division: South Pacific

District: Sacramento

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Sacramento River Deep Water Ship Channel, California

SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM. PCT. OF EST. FED. COST
Allocation to 30 September 1994	$ 7,717,000	
Conference Allowance for FY 1995	500,000	
Allocation for FY 1995	0 1/	
Allocations through FY 1995	$ 7,717,000	31
Allocation Requested for FY 1996	$ 100,000	31
Programmed Balance to Complete After FY 1996	$17,083,000	
Unprogrammed Balance to Complete After FY 1996	0	

PHYSICAL DATA
(Continued)

Fish and Wildlife Areas:
Deposit dredged material at Prospect Island to aid in development of wetland and upland habitat for fish and wildlife mitigation and enhancement purposes.

1/ Reflects $79,000 reduction assigned as savings and slippage and $421,000 reprogrammed from the project.

JUSTIFICATION: Inadequate channel depths and widths produce serious detriments to deep-draft commercial vessel traffic using the navigation channel on the Sacramento River from Collinsville to the Port of Sacramento. Since the existing channel was completed in 1963, tonnages have increased as a result of increased productivity of the agricultural industry in the northern and central portions of California, increased exports of forest products from this region, and increased foreign demand for agricultural products. Imports, including nitrogenous fertilizers, bulk commodities, and general cargo have also increased during this period. In addition, the channel has provided deepwater access for industries in the service area. New shipping techniques and modern terminal development have been necessary to accommodate this increased commerce. New or prospective trade policies point to the expansion of United States trade opportunities. This trade is significant to the Port of Sacramento since the Port's service area produces large quantities of rice, other grains, wood chips, and other dry bulk products required in the economy along the Pacific Rim. In 1993, 1,400,000 tons of commodities moved through the Port of Sacramento. With the increase in the shipping industry, vessel sizes have also increased accordingly. Currently these larger vessels must carry only a partial load going to or from the Port of Sacramento because of the channel depth restriction (only 20% of the world's fleet can currently load to full design draft). To remain competitive with other western ports, the channel deepening is vital to the Port of Sacramento. Once deepened, the Port will be able to accommodate 70% of the world's fleet at full design draft. Average annual benefits at 1 October 1985 price level are $10,662,000, all navigation.

FISCAL YEAR 1996: The requested amount will be applied as follows:

Planning, Engineering and Design (Contract Preparations)	$100,000
Total	$100,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights of way, and dredged material disposal areas.	$ 7,335,000	
Modify or relocate buildings, utilities, roads, bridges (except railroad bridges), and other facilities, where necessary in the construction of the project.	9,165,000	
Pay 25 percent of the costs allocated to deep draft navigation during construction.	8,300,000	0
Total Non-Federal Costs	$24,800,000	0

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

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STATUS OF LOCAL COOPERATION: A Local Cooperation Agreement (LCA) was signed with the Port of Sacramento, the local sponsor, on 27 June 1986, and a modification to the LCA, necessitated by the Water Resources Development Act of 1986, was signed on 6 December 1988. The current non-Federal cost estimate of $24,800,000, which includes a cash contribution of $8,300,000, is an increase of $2,000,000 from the non-Federal cost estimate of $22,800,000 noted in the Modification to the LCA, which included a cash contribution of $7,300,000. The Port has indicated concurrence in the cost increases and remains committed to completion of the project.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $25,200,000 is a decrease of $300,000 from the latest estimate ($25,500,000) presented to Congress (FY 1995). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	$ -300,000
Total	$ -300,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Impact Statement was filed on 8 May 1981; the Supplemental Environmental Impact Statement was filed on 2 January 1987. An Environmental Assessment addressing the environmental impacts of changes in design due to deleting portions of planned widening was completed 1 May 1988, and a Finding of No Significant Impact was signed 1 August 1988.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in FY 1982 and to initiate construction in the FY 1985 Supplemental Appropriations Act. The first construction contract for deepening was awarded in February 1989.

The local sponsor requested a delay in construction during fiscal years 1993 and 1994 in order to resolve utility relocations issues and pursue the establishment of an assessment district and/or the sale of lands as a means of meeting their remaining financial responsibility for project completion. The sponsor expects to resolve these issues within the year and be prepared to resume construction in late FY 1995. The sponsor expects to construct disposal area dikes for contract 3, Mile 35 to Mile 25, in the spring or summer of 1995.

The Water Resources Development Act of 1990 includes language directing the Corps to enforce Section 10 authority for relocation of utility lines on a reimbursable basis. However, the Port has requested the Corps not pursue enforcement and expects to resolve differences with the utility company through litigation procedures initiated in October 1993.

APPROPRIATION TITLE: Construction, General - Channels and Harbors (Navigation)

PROJECT: San Francisco Bay to Stockton, California (John F. Baldwin and Stockton Ship Channels) (Continuing)

LOCATION: The project is located on navigation channels that extend from the San Francisco Bay entrance to the Port of Stockton through San Francisco, Marin, Contra Costa, Solano, Sacramento, and San Joaquin Counties.

DESCRIPTION: The project consists of deepening the San Francisco Bar Channel to 55 feet, the John F. Baldwin Ship Channel through Pinole Shoal and Carquinez Straits into Suisun Bay to 45 feet and the remaining Stockton Ship Channel to 35 feet, bank protection, maintenance of bank protection, and wetland wildlife habitat enhancement. The Bulls Head Channel portion of the Suisun Bay Channel is unprogrammed.

AUTHORIZATION: 1965 River and Harbor Act

REMAINING BENEFIT-REMAINING COST RATIO: Stockton Ship Channel, Avon to Stockton - essentially completed;
John F. Baldwin Ship Channel to Martinez - 4.7 to 1 at 3 1/4 percent.

TOTAL BENEFIT-COST RATIO: Stockton Ship Channel, Avon to Stockton - essentially completed.
John F. Baldwin Ship Channel to Martinez - 4.2 to 1 at 3 1/4 percent.

INITIAL BENEFIT-COST RATIO: 2.4 to 1 at 3 1/4 percent (Total Project) (FY 1970)

BASIS OF BENEFIT-COST RATIO: Benefits for the John F. Baldwin Ship Channel to Martinez portion including the West Richmond, Pinole Shoal and Carquinez Straits Channels are based on the latest evaluation of that portion dated May 1998 at March 1988 price levels. This also includes Suisun Channel price leveled through 1 October 1994.

SUMMARIZED FINANCIAL DATA		
Estimated Federal Cost (COE)		$172,250,000
Programmed Construction	$151,665,000	
Unprogrammed Construction	$ 20,585,000	
Estimated Federal Cost (USCG)		780,000
Total Estimated Federal Cost		173,030,000
Estimated Non Federal Cost		29,270,000
Cash Contributions	20,000	
Other Costs	29,250,000	
Total Estimated Project Cost		$202,300,000

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	37	Being Determined

Division: South Pacific District: San Francisco

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SUMMARIZED FINANCIAL DATA (Continued)

		ACCM. PCT. OF EST. FED. COST
Allocations to 30 September 1994	$63,349,000	
Conference Allowance for FY 1995	700,000	
Allocation for FY 1995	630,000 1/	
Allocations through FY 1995	63,979,000	37%
Allocation Requested for FY 1996	800,000	38%
Programmed Balance to Complete after FY 1996	86,886,000	
Unprogrammed Balance to Complete after FY 1996	20,585,000	

1/Reflects $111,000 reduction for savings & slippage and $41,000 reprogrammed to the project.

PHYSICAL DATA

Channels: Deepen San Francisco Bar Channel to 55 feet. Deepen main internal bay channels upstream to Avon to 45 feet, and deepen the existing alignment of the Suisun Bay and Stockton Ship Channels from Avon to Stockton to 35 feet.

Revetment: Place rock revetment on levees bordering the ship channel.

Turning Basin: Provide access and turning basin facilities near the refinery piers at Martinez, Avon, and Oleum.

Maneuvering Area: Enlarge and deepen maneuvering areas adjacent to major petroleum cargo terminals to 45 feet.

JUSTIFICATION: Inadequate channel depths and widths, and circuitous navigation channels produce serious detriments to deep-draft commercial and military vessel traffic using the navigation channels that extend from the San Francisco Bay entrance upstream to the Port of Stockton. Many existing vessels can use the navigation channels only by partial loading, partial off loading (lightering of crude oil into smaller vessels while anchored in the Central Bay), and/or awaiting favorable tides. All are costly restrictions. In addition, in-bay transfer of crude oil has environmental risks associated with it. Current trends in the shipping industry toward larger, deep-draft vessels will aggravate these detriments. The project will provide a deeper channel to accommodate the deeper draft vessels and reduce the chance of grounding. Selective dredged material will be used to enhance wildlife conditions. Average annual benefits for the Stockton Ship Channel from Avon to Stockton portion are $8,765,000, all navigation related, based on 1980 price levels; for the John F. Baldwin Ship Channel to Martinez portion benefits are $21,690,000, all navigation related, based on 1988 price levels.

FISCAL YEAR 1996: The requested amount will be applied as follows:

Continue Planning, Engineering & Design	$ 800,000
Total	$ 800,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the River and Harbor Act of 1965, the non-Federal sponsor must comply with the requirement listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Provide lands, easements, rights of ways, and dredged material disposal areas.	$21,270,000	
Modify or relocate buildings, utilities, roads, bridges (except railroad bridges) and other facilities, where necessary in the construction of the project.	800,000	$452,000
Berthing	7,180,000	
Cash Contribution (the cash contribution is based on a contribution of four cents per cubic yard of dredged material to be used as fill in areas not to be developed for public use.)	20,000	
Total Non-Federal Costs	$29,270,000	$452,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.
Division: South Pacific District: San Francisco San Francisco Bay to Stockton, California
(John F. Baldwin and Stockton Ship Channels)

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STATUS OF LOCAL COOPERATION: The Board of Supervisors of Contra Costa County, by resolution adopted 16 October 1979, expressed intention to furnish the required assurances of local cooperation for the John F. Baldwin portion of the 45' project based on the incremental approach to project construction. Formal assurances for deepening to 35' and otherwise improving the Stockton Deep Water Ship Channel from Pittsburg to Stockton were furnished by the Stockton Port District by letter dated 9 April 1970. The Stockton Port District provided formal assurances for navigation, and fish and wildlife mitigation and enhancement for the Avon to Stockton portion of the 35' project on 13 April 1982. For that portion of the 35' project, (Avon to Stockton) within its current boundaries, Contra Costa County will assume sponsorship by March 1995. In accordance with Section 221 of the Flood Control Act of 1970 (Public Law 91-611), a written agreement satisfying all the requirements of local cooperation for Southampton Shoal Channel and Richmond Long Wharf maneuvering area was obtained from the Contra Costa County Board of Supervisors and was signed by the District Engineer 31 July 1984. A written agreement for the West Richmond, Pinole Shoal, Carquinez Strait, and Suisun Bay Channels will be executed with the Contra Costa County Board of Supervisors before any 45' construction is accomplished in those areas. The Board passed a resolution of continued support for this phase of the project on 3 May 1988. A Memorandum of Agreement between the Department of the Army, San Francisco District and Contra Costa County to sample the berthing areas of the project was executed on 12 September 1989. The Board of Supervisors of Contra Costa County reaffirmed their support of the project in a letter dated 10 July 1990. Contra Costa County has instituted a quarterly users meeting to promote coordination between the county, potential beneficiaries and the Corps of Engineers. The local sponsor conducted necessary testing of berth areas in January 1994. Federal Channel sediment testing for West Richmond, Pinole Shoal, Carquinez Strait, and Suisun Bay Channel was completed March 1994.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $172,250,000 is the same as the latest estimate presented to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement (EIS) for the San Francisco Bar Channel was filed on 14 April 1971. The Final EIS for the Stockton Ship Channel, Avon to Stockton, was filed on 26 July 1981. The Final EIS for the Richmond Long Wharf and Southampton Shoal Channels was filed on 15 July 1984. The final EIS for the remaining work is scheduled for July 1996.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in FY 1967 and for construction in FY 1970. Special engineering studies to identify and quantify the changes in the salinity, if any, of the estuary associated with the channel deepening are continuing. These studies include model tests and the development of a data storage and retrieval system to analyze both prototype and model data. The studies are currently addressing the deepening from 36 to 45 feet of the remaining reach of the existing John F. Baldwin Channel. Construction of this reach has been delayed pending completion of the studies and intragency consensus on appropriate mitigation measures, if required. This decision is scheduled to be reached by March 1995.

EPA's designation of a general purpose section 102 ocean disposal occured in August 1994 and criteria for in-bay and upland dredged sediment disposal are being pursued as part of the San Francisco bay Long term Management Strategy (LTMS). The LTMS study program includes participation by the Corps of Engineers, EPA Region IX, the State of California, the US Navy and other navigation interests. The entire study effort is being integrated by the Corps of Engineers. The draft EIS for Section 102 ocean site designation was released in December 1992, with final designation by EPA scheduled for June 1994. The San Francisco Bay to Stockton Phase III project schedule is sensitive to dredged material disposal requirements developed by the LTMS, including incorporation into the EIS and General Design Memorandum.

The authorized 45-foot deep Suisun Bay Channel portion of the project was reclassified to the active category by the Chief of Engineers on 24 August 1993, following a favorable preliminary reevaluation of the economics for part of that reach based on a new public terminal which began operation in 1991. The study was funded by Contra Costa County, the project sponsor. Only the Bulls Head Channel portion of the Suisun Bay Channel reach will be incorporated into design and construction of the remaining John F. Baldwin Ship Channel 45-foot project, and the remainder of the Suisun Bay Channel deepening will be deleted upon completion of other portions of the prroject.

Division: South Pacific District: San Francisco San Francisco Bay to Stockton, California
(John F. Baldwin and Stockton Ship Channels)

APPROPRIATION TITLE: Construction, General - Channels and Harbors (Navigation)

PROJECT: Sonoma Baylands Wetland Demonstration Project, California

LOCATION: The 348-acre Sonoma Baylands site is located in Sonoma County, California, approximately 25 miles north of San Francisco near the mouth of the Petaluma River, on the northern shoreline of San Pablo Bay.

DESCRIPTION: The project includes restoration of tidal wetlands on diked lands, including construction of a replacement levee around the landward periphery of the site, internal peninsulas for wave protection, weirs for the discharge of dredged material supernatant, and modification of three existing Pacific Gas and Electric high voltage electrical towers. Project also includes placement of maintenance-dredged material from the Petaluma River navigation channel in a pilot project area and placement of suitable Oakland Harbor dredged material on the remainder of the site.

AUTHORIZATION: The project was authorized by Section 106, Water Resources Development Act of 1992, Public Law 102-580 (WRDA 1992).

REMAINING BENEFIT - REMAINING COST RATIO: 1.0 to 1 at 8 percent

TOTAL BENEFIT - COST RATIO: 1.0 to 1 at 8 percent

INITIAL BENEFIT - COST RATIO: 1.0 to 1 at 8 percent (FY 1995)

BASIS OF BENEFIT - COST RATIO: Non-monetary (wetland habitat restoration) benefits are equivalent to costs.

SUMMARIZED FINANCIAL DATA		
Estimated Federal Cost		$ 6,375,000
Estimated Non-Federal Cost		2,125,000
Cash Contributions	821,000	
Other Costs	1,304,000	
Total Estimated Project Cost		$ 8,500,000

STATUS: (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	45	Being Determined

PHYSICAL DATA

Site Preparation:
Levees & other facilities: 11,470 linear foot levee at the landward periphery of site; 14,760 linear feet of wave protection peninsulas; 1,960 linear foot interior levee; 3 weir structures; and modification of three existing Pacific Gas and Electricity high voltage towers. Placement of approximately 2.5 million cubic yards of Oakland Harbor dredged material.

			ACCUM PCT. OF EST. FED. COST
Allocations to 30 September 1994	$ 4,375,000		
Conference Allowance for FY 1995	8,000,000		
Allocation for FY 1995	6,734,000	1/	
Allocations through FY 1995	11,109,000	2/	52
Allocation Requested for FY 1996	500,000		89
Programmed Balance to Complete after FY 1996	0		
Unprogrammed Balance to Complete after FY 1996	$ 0		

1/ Reflects $1,266,000 reduction for savings and slippage.

2/ Reflects $6,826,000 in programmed carryover into FY 1996.

JUSTIFICATION: Approximately 82% of the original tidal wetland habitat of San Francisco Bay has been destroyed. Restoration of tidal wetlands at Sonoma Baylands will provide high quality, secure habitat for juvenile estuarine fish, migratory waterbirds, and endangered species including the California Clapper Rail and the Salt Marsh Harvest Mouse. This demonstration project will implement a portion of the U.S. Fish and Wildlife Service's Endangered Species Recovery Plan and will help improve wetland restoration construction techniques which can be applied to other similar sites in the Bay Area. The restoration project will use both Oakland Harbor new work and Petaluma River maintenance-dredged material to increase the elevation of the subsided land to accelerate wetland establishment.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $500,000 and $6,826,000 respectively, with an unobligated carryover of $352,000 after excess into FY 1997, will be applied as follows:

Continue Placement of Oakland Hbr Dredged Material	$ 1,460,000
Continue Planning, Engineering and Design	140,000
Construction Management	140,000
Total	$ 1,740,000

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NON-FEDERAL COST: In accordance with the cost sharing and financial concepts reflected in the Water Resources Development Act of 1992 (WRDA), the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursement	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easement, right of ways, and dredged material disposal areas.	$ 940,000	$ N/A
Modify or relocate utilities, roads, bridges (except railroad bridges) and other facilities, where necessary in the construction of the project.	290,000	N/A
Pay 25 percent of the cost allocated to fish and wildlife restoration in accordance with Section 106 of the Water Resources Development Act of 1992.	895,000	N/A
Total Non-Federal Costs	$ 2,125,000	$ N/A

The Non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The local sponsor, the California State Coastal Conservancy, signed the PCA 6 May 1994.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $6,375,000 is a decrease of $16,825,000 from the latest estimate ($23,200,000) presented to Congress (FY 1995).

This change includes the following items:

ITEM	AMOUNT
Price Escalation on Construction Features	$ 135,000
Post Contract Award & Other Estimating Adjustments (including contingency adjustments)	$ - 16,960,000
Total	$ 16,825,000

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STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Assesament/Finding Of No Significant Impact (EA/FONSI) for Sonoma Baylands was completed 15 April 1994. The Oakland Harbor Supplemental Environmental Impact Statement (SEIS) included Sonoma Baylands as a disposal alternative.

OTHER INFORMATION: Funds to initiate preconstruction engineering, design and construction were added by Congress in FY 93 and FY 94. Only dredged material which is suitable for both aquatic disposal and wetland restoration will be used.

Fenced funds in ACT Language from 1994 in the amount of $5,234,000 will be offered for excess in FY 1995. These funds cannot be used due to the favorable bids on the construction contract awarded December 1994 and the subsequent reduction in overall project cost.

APPROPRIATION TITLE: Construction, General - Beach Erosion Control

PROJECT: Surfside-Sunset and Newport Beach (Orange County), California (Continuing)

LOCATION: Project is located on the coast of southern California south of Long Beach, in Orange County, and includes 17 miles of coastline between the mouth of the San Gabriel River and the entrance to Newport Bay.

DESCRIPTION: The authorized plan of improvement provides for construction of a single 2,600-foot long detached offshore rubblemound breakwater and eight groins, approximately 17,300,000 cubic yards of sand beachfill, and subsequent periodic beach nourishment for protection of the shore from Surfside Beach to Newport Beach, California.
(SEE OTHER INFORMATION)

AUTHORIZATION: River and Harbor Act of 1962.

REMAINING BENEFIT - REMAINING COST RATIO: Not applicable because initial construction has been completed.

TOTAL BENEFIT-COST RATIO: 3.1 at 3-1/8 percent.

INITIAL BENEFIT - COST RATIO: 3.1 to 1 at 3-1/8 percent (FY 1966).

BASIS OF BENEFIT-COST RATIO: Based on the project functioning independently.

SUMMARIZED FINANCIAL DATA				ACCUM. PCT.OF EST. FED COST	STATUS (1 Jan 95)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost			$34,240,000		Entire Project	62	Indefinite 1/
Programmed Construction		$21,968,000					
Unprogrammed Construction		12,272,000					
Estimated Non-Federal Cost			16,860,000				
Programmed Construction		10,720,000					
Cash Contributions	$10,780,000						
Other Costs	0						

1/ Stage 10 is scheduled to complete in March 1997; remaining work (Stage 6 and future beach replenishment stages) pending a decision to construct these features.

Division: South Pacific   District: Los Angeles   Surfside-Sunset and Newport Beach, (Orange County), California

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			ACCUM. PCT. OF EST. FED COST
Estimated Non-Federal Cost			
Unprogrammed Construction		6,088,000	
Cash Contributions	6,080,000		
Other Costs	0		
Total Estimated Programmed Construction Cost		32,740,000	
Total Estimated Unprogrammed Construction Cost		18,360,000	
Total Estimated Project Cost		$51,100,000	
Allocations to 30 September 1994		$15,368,100	
Conference Allowance for FY 1995		1,000,000	
Allocation for FY 1995		1,000,000 1/	
Allocations Through FY 1995		16,368,100 2/	48
Allocation Requested for FY 1996		100,000	48
Programmed Balance to Complete After FY 1996		5,500,000 0	
Unprogrammed Balance to Complete After FY 1996		$12,272,000	

PHYSICAL DATA

Groins: 8 varying from 470 to 600 feet in length
Breakwater: detached, rubblemound, about 2,600 feet long

Beach Replenishment: 17,300,000 cubic yards

1/ Reflects $158,000 reduction for savings and slippage and $158,000 reprogrammed to the project.

2/ Reflects $840,000 in programmed carrover into FY 1996.

JUSTIFICATION: The proposed beach replenishment will arrest continuing erosion of the shoreline in the project area which threatens beach houses, roadways and streets, parking areas, and utilities. Surveys show a net downcoast movement of about 300,000 cubic yards of beach sand on an average annual basis. To replace this loss, a feeder beach was established at the Surfside-Sunset Beach area for placement of 1.8 million cubic yards of imported sand every 5 years. The last beach replenishment at Surfside-Sunset Beach (Stage 9) was completed in November 1990.
Continuous erosion has receded the beach to about 180 feet in the Surfside Colony since the Stage 9 beach replenishment was completed. Additionally, the increased beach size will result in greater beach usage and recreational benefits. Estimated average annual benefits are as follows:

Division: South Pacific District: Los Angeles Surfside-Sunset and Newport Beach, (Orange County), California

Annual Benefits	Amount
Beach Erosion Control	$11,494,000
Recreation	1,006,000
Total	$12,500,000

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $100,000 and $840,000, respectively, will be applied as follows:

Initiate Beach Replenishment (Stage 10)	$673,000
Engineering and Design	204,000
Construction Management	63,000
Total	$940,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the River and Harbor Act of 1962, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payment During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Pay 33 percent of the first costs allocated to breakwater, groins, and beach replenishment and bear 33 percent of the maintenance cost during the useful life of the project.	$16,860,000	$200,000 1/

1/ Exclusive of periodic beach replenishment.

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction. In addition, local interests have expended $490,000 for supplemental work not required by authorizing legislation but located in the immediate project area.

Division: South Pacific District: Los Angeles Surfside-Sunset and Newport Beach, (Orange County), California

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STATUS OF LOCAL COOPERATION: The State of California and Orange County provided the required assurances of local cooperation by resolutions dated 4 September 1963 and 18 September 1963, respectively, for construction of the project. In addition, local interests furnished contributed and advance funds for design and construction of the completed Stages 1 through 5, 7, 8, and 9 of the project. By letter of 27 December 1994, Orange County, one of five local sponsors, advised of Los Angeles District of their tenuous financial position to meet their share of required local funds. Orange County filed Chapter 9 bankruptcy in December 1994. Further analysis and evaluation of its financial capability is underway. As a result, award of the contract was rescheduled from July 1995 to July 1996, with completion of Stage 10 in FY 1997.

The current non-Federal cost estimate of $16,860,000, all cash contributions, is an increase of $100,000 over the non-Federal cost estimate of $16,760,000 presented to Congress in the Fiscal Year 1995 Budget Justification Data furnished to the Appropriation Committees. Our analysis of non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $34,240,000 is an increase of $200,000 over the latest estimate ($34,040,000) presented to Congress (FY 1995). This increase is due to price escalation on construction features.

OTHER INFORMATION: Funds to initiate preconstruction planning and construction were advanced and contributed by local interests in FY 1964. Construction funds were appropriated in FY 1966 for initial reimbursement to local interests.

Construction was accomplished as follows: Stage 1, beach replenishment along Surfside-Sunset Beach in 1964; Stage 2 two groins and beach replenishment on Newport Beach in 1968; Stage 3, four groins on Newport Beach in 1969; Stage 4A, beach replenishment along Surfside-Sunset Beach in 1971; Stages 4B and 5, two groins, rehabilitation of two groins, and beach replenishment on Newport Beach in 1973; and Stages 7, 8, and 9, beach replenishment along Surfside-Sunset Beach in June 1979, April 1984, and November 1990, respectively. To date, eight groins have been built.

The city of Huntington Beach and the State of California feel that the beach material placed at Surfside-Sunset is not going downcoast through the littoral process in sufficient quantities to nourish West Newport Beach as originally estimated. They have requested that nourishment at West Newport Beach be included with Stage 10.

Construction of Stage 6, a 2,600-foot detached breakwater, has been indefinitely postponed. The beach immediately downcoast of Anaheim Bay (Surfside Colony) suffers the worst erosion in the project area. Local interests desire structural measures to protect the area. A study to conduct a preliminary assessment of cost-effective structural alternatives to reduce long-term beach nourishment costs was initiated in November 1988. The draft study report was completed in May 1992; the final report is scheduled for completion in April 1995.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Clifton, Arizona (Continuing)

LOCATION: The town of Clifton is located on the San Francisco River in Greenlee County, Arizona, approximately 170 miles northeast of Tucson.

DESCRIPTION: The project consists of both structural and nonstructural elements, including an earthfill levee approximately 3,000 feet in length, with floodgates, bridge modifications, and evacuation and relocation of 86 residences in the floodplain and floodproofing of 11 businesses. Recreation development consists of 59 tent campsites and 113 recreational vehicle sites within an area of 20 acres.

AUTHORIZATION: Water Resources Development Act of 1990.

REMAINING BENEFIT - REMAINING COST RATIO: 1.9 to 1 at 8-7/8 percent.

TOTAL BENEFIT-COST RATIO: 1.07 to 1 at 8-7/8 percent.

INITIAL BENEFIT-COST RATIO: 1.03 to 1 at 8-7/8 percent (FY 1991).

BASIS OF BENEFIT-COST RATIO: Benefits based on Final General Design Memorandum revised November 1992 at October 1989 price levels.

SUMMARIZED FINANCIAL DATA			ACCUMULATED PCT OF EST FED COST	STATUS (1 JAN 95)	PERCENT COMPLETE	COMPLETION SCHEDULE
Estimated Federal Cost		$ 9,900,000		Entire Project	3	December 1996
Estimated Non-Federal Cost		5,400,000				
Cash Contributions	$1,760,000					
Other Costs	3,640,000					
Total Estimated Project Cost		$15,300,000				

Division: South Pacific District: Los Angeles Clifton, Arizona

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		ACCUMULATED PCT OF EST FED COST
Allocations to 30 September 1994	$ 4,692,000	
Conference Allowance for FY 1995	2,900,000	
Allocation for FY 1995	4,141,000 1/	
Allocations through FY 1995	8,833,000	89
Allocation Requested for FY 1996	900,000	98
Programmed Balance to Complete after FY 1996	167,000	
Unprogrammed Balance to Complete after FY 1996	0	

1/ Reflects $459,000 reduction assigned as savings and slippage and $1,700,000 reprogrammed to the project.

PHYSICAL DATA

Structural Flood Control

South Clifton Levee	
Length:	2,943 feet
Height:	4 to 17.1 feet
Floodgate, Highway 666	
Width:	36 feet
Height:	15.7 feet
Floodgate, SPRR Bridge	
Width:	18 feet
Height:	16.5 feet
Excavation of riverbed:	88,300 cubic yards
Floodwall Length	
Upstream from bridges:	100 feet
Between bridges:	12 feet
Downstream from bridges:	70 feet

Non-Structural Flood Control

Floodproofing	
Numbering of buildings:	11
Floodshields:	4
Floodwalls:	1
Wet Floodproofing:	6
Relocation:	86

Recreational Development

Total acres:	20
Tent campsites:	59
Recreational Vehicle sites:	113

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JUSTIFICATION: The town of Clifton was built on the meander belt of the San Francisco River, at the base of the steep valley walls cut by the river. The town has virtually no protection from floodflows. Damaging floods have occurred at least ten times over the past 100 years (since 1891). On October 1, 1983, Clifton was hit by the most severe flood on record which swept through the town leaving behind a scene of devastation. During the flood, the San Francisco River peaked at 90,900 cubic feet per second, about a 50-year flood, and flows reached depths of more than 9 feet in portions of the town, depositing piles of debris up to 6 feet high. Residential damages included total destruction of approximately 40 homes, major damages to 231, and minor damages to 52. Forty-one businesses were destroyed, 57 suffered major damages and eight sustained minor damages. Because of a shortage of emergency housing, people were forced to live in seriously overcrowded conditions, with up to 40 persons per house as long as a month after the flood. The 366-foot long, U.S. Route 666 bridge which crosses the San Francisco River at Clifton also was overtopped during the flood. Emergency costs and damages together totaled nearly $20 million, $26.7 million at October 1994 prices. Following the flood, the President issued a disaster declaration for 11 counties, including Greenlee County. In response, and in cooperation with the community and other Federal, State and local agencies, the Corps of Engineers conducted a study and developed a plan combining structural and nonstructural elements. Average annual benefits, at October 1989 price levels, are as follows:

Annual Benefits	Amount
Flood damage prevention	$ 464,000
Relocation	485,000
Other Benefits (Redevelopment benefits, reoccupation cost savings, and insurance cost savings)	146,000
Total	$1,095,000

FISCAL YEAR 1996: The requested amount will be applied as follows:

Initiate recreation construction	$ 757,000
Planning, Engineering and Design	24,000
Construction Management	119,000
Total	$ 900,000

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NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights-of-way, and dredged material disposal areas for the nonstructural portion of the project (not to exceed 25 percent of the cost).	$1,270,000	
Provide lands, easements, rights-of-way, and dredged material disposal areas for the structural portion of the project.	1,439,000	
Modify or relocate utilities, roads, bridges (including railroad bridges), and other facilities, where necessary for the construction of the project for the structural portion of the project.	931,000	
Pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities for the project.	1,390,000	$48,000
Pay 5 percent of the structural costs allocated to flood control and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	370,000	15,000
Total Non-Federal Costs	$5,400,000	$63,000

The Non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The State of Arizona Division of Emergency Services is the local sponsor. By approval of House Bill 2098, Chapter 72, on May 1, 1991, the State of Arizona reaffirmed its support of the project at a level consistent with current cost-sharing policy for construction. A Local Cooperation Agreement (LCA) was executed in July 1993.

The current non-federal cost estimate of $5,400,000, which includes a cash contribution of $1,760,000, is an increase of $1,200,000 from the non-Federal cost estimate of $4,200,000 noted in the Local Cooperation Agreement, which included a cash contribution of $1,675,000. In a meeting on 28 September 1994, the non-Federal sponsor indicated that it is financially capable and willing to contribute the increased non-Federal share. Our analysis of the non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $9,900,000 is an increase of $300,000 over the latest estimate ($9,600,000) presented to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$274,000
Post-Contract Award and Other Estimating Adjustments	386,000
Price Escalation on Real Estate (Non-Structural)	-360,000
Total	$300,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Impact Statement (EIS) was included in the Final Survey and Environmental Impact Statement for Flood Control and Related Purposes, Clifton, Arizona, September 1986. A Supplemental Environmental Assessment (SEA) was completed May 1991. The SEA amends the original EIS for Clifton. A Section 404(b)(1) evaluation is included in the SEA. The project is in compliance with the recently-enacted Arizona Environmental Quality Act.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in FY 1988. Funds to initiate construction were appropriated in FY 1991.

		ACCUMULATED PCT OF EST FED COST
Allocations to 30 September 1994	$4,539,000	
Conference Allowance for FY 1995	4,200,000	
Allocation for FY 1995	4,200,000 1/	
Allocations through FY 1995	8,739,000	79
Allocation Requested for FY 1996	2,261,000	100
Programmed Balance to Complete after FY 1996	0	
Unprogrammed Balance to Complete after FY 1996	0	

1/ Reflects $665,000 reduction assigned as savings and slippage and $665,000 reprogrammed to the project.

PHYSICAL DATA

Structural Flood Control

NORTH LEVEE:
Type: - Stone revetted rolled earthfill
  Height - 20 feet maximum
  Length - 19,330 feet

MCLAWS LEVEE:
Type: - Stone revetted rolled earthfill
  Height - 16 feet maximum
  Length - 7,320 feet

Lands and Damages: Acres - 315 ponding area
Levee Rights-of-Way: Acres - 158
Floodgate: Apache Railroad

Non-Structural Flood Control

RELOCATION:
  Physical Relocation of 41 Residences
  Physical Relocation of 7 Business Properties

JUSTIFICATION: The existing project, constructed by the Corps of Engineers in 1948, was designed to protect the city of Holbrook on the north bank of the river from a 100-year flood. Since 1948, however, aggradation in the streambed has decreased the capacity of the channel to about 25,000 cfs, about a 9-year flood. Should the existing levee be overtopped and/or breached, most of the city of Holbrook would be inundated. Extensive damages and near disasters have occurred on three separate occasions since 1970. Existing development in the floodplain is valued at $63 million. A two-levee plan was authorized by Water Resources Development Act of 1986. Average annual benefits, based on October 1989 price levels, are as follows:

Annual Benefits	Amount
Flood Damage Prevention	$ 943,000
Other Benefits (Employment and insurance cost savings)	212,000
Total	$1,155,000

FISCAL YEAR 1996: The requested amount will be applied as follows:

Complete levee construction	2,006,000
Construction Management	255,000
Total	$2,261,000

Division: South Pacific District: Los Angeles Holbrook, Arizona

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NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the following requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance, Repair, Rehabilitiation, and Replacement Costs
Provide lands, easements, rights-of-way, and dredged material disposal areas for the nonstructural portion of the project (not to exceed 25 percent of the cost).	$ 700,000	
Provide lands, easements, rights-of-way, and dredged material disposal areas for the structural portion of the project.	284,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project for the structural portion of the project.	338,000	
Pay 20 percent of the structural costs allocated to flood control to bring the total non-federal share of flood control costs to 25 percent, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	2,278,000	24,000
Total Non-Federal Costs	$3,600,000	$24,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The city of Holbrook is the local sponsor. By 19 November 1991 letter, the city of Holbrook expressed its willingness to financially participate in the construction of the project at a level consistent with current cost-shared policy for construction. A Local Cooperation Agreement (LCA) was executed in 24 August 1993.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $11,000,000 is the same as the last estimate presented to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement (EIS) was filed with the Environmental Protection Agency (EPA) 14 August 1981. The final Environmental Assessment was approved in February 1991, and a Record of Decision (ROD) was signed in January 1993.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in FY 1988, and funds to initiate construction were appropriated in FY 1992.

An incremental analysis of benefits and costs of the proposed Leroux Wash Levee component of the project determined that this levee would impair existing drainage while protecting an area that is basically undeveloped, and the component was deleted from the project.

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APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Nogales Wash, Arizona (Continuing)

LOCATION: The project area is located adjacent to the United States - Mexico border, in the Central and Northern portions of the city of Nogales in Santa Cruz County, Arizona.

DESCRIPTION: The plan of improvement for the project consists of: a channel to capture breakout flows from Nogales Wash and Potrero Creek and convey them around the Chula Vista/Pete Kitchen community to provide a 100-year level of protection and a flood warning system that would provide advance warning time to the residents of the area. (See OTHER INFORMATION).

AUTHORIZATION: Water Resources Development Act of 1990.

REMAINING BENEFIT-REMAINING COST RATIO: 1.5 to 1 at 8-1/2 percent.

TOTAL BENEFIT-COST RATIO: 1.3 to 1 at 8-1/2 percent.

INITIAL BENEFIT-COST RATIO: 1.1 to 1 at 8-1/2 percent (FY 1994).

BASIS OF BENEFIT-COST RATIO: The benefits are based on the Economic Reanalysis Report dated April 1994, at October 1993 price levels.

SUMMARIZED FINANCIAL DATA			ACCUMULATED PCT OF EST FED COST	STATUS (1 JAN 95)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$ 6,400,000		Entire Project	Not Started	Being Determined
Estimated Non-Federal Cost		4,000,000				
Cash Contributions	$ 500,000					
Other Costs	3,500,000					
Total Estimated Project Cost		$10,400,000				

Division: South Pacific District: Los Angeles Nogales Wash, Arizona

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		ACCUMULATED PCT OF EST FED COST
Allocations to 30 September 1994	$ 1,354,000	
Conference Allowance for FY 1995	600,000	
Allocation for FY 1995	205,000 1/	
Allocations through FY 1995	1,559,000	24
Allocation Requested for FY 1996	75,000	26
Programmed Balance to Complete After FY 1996	4,466,000	
Unprogrammed Balance to Complete After FY 1996	0	

1/ Reflects $95,000 reduction assigned as savings and slippage and $300,000 reprogrammed from the project.

PHYSICAL DATA

Chula Vista Channel:
Inceptor Reach:
  Type - Trapezoidal grouted stone (with levee)
    Height - 18.0-23.4 feet (north side)
      10.8-14.0 feet (south side)
      5.4-13.0 feet (levee above ground)
    Width (base) - 30-60 feet
    Length - 572 feet

Concrete Reach:
  Type - Rectangular (except upstream and downstream end transitions) concrete
    Height - 12.8-30.1 feet
    Width - 50-65 feet
    Length - 1,493 feet

Bridges (highway): Two to be constructed

Energy Dissipator Reach:
  Type - Trapezoid grouted stone
    Height - 10.9-17.5 feet
    Width - 61.1-150 feet
    Length - 400 feet

Rain Gage:
  Type - Modular, self contained event-reporting ALERT precipitation gage
  Number : 7

Stream Gage:
  Type - \Float/Bubbler Type, event reporting and self powered ALERT stream gage
  Number: 6

Warning Devices:
  Type - Siren
  Number: 3 (install with 3 of the stream gages)

Base Station:
  Santa Cruz County complex

Base Station Software:
  ALERT software that provides all functions required for real time FWS

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PHYSICAL DATA (Continued)

Downstream Reach:
  Type - Trapezoid unlined and riprap
    Height - 13.4-17.5 feet
    Width (base) - 20-150 feet
    Length - 640 feet

Construction Lands: 11.6 acres

Mitigation Lands: 8.3 acres

Floodwarning System:
  Type - Automated Local Evaluation in Real Time (ALERT)

Repeater Station:
  Type - ALERT repeater station with two antennas, solar panel, radio repeater and power supply.
  Number: To be determined

Recreation:
  Picnic sites: 3 - concrete slab, picnic table, grill and shelter structure

  Bicycle/hiking trail: 1,580 foot long paved (Chula Vista Channel)

JUSTIFICATION: Nogales Wash is the major drainage system for the city of Nogales. It originates in Mexico and enters Arizona as a covered floodway, which was constructed by the International Boundary and Water Commission during the 1930's. Urbanization in Nogales, Mexico, current population 240,000, has greatly increased runoff into the Nogales Wash floodplain, causing frequent flooding and erosion problems in Nogales, Arizona. A flood in October 1977 caused over $700,000 in damages and displaced 29 families. At October 1994 price levels, a similar flood would cause about $1.48 million in damages. Flooding also occurred along Nogales Wash in October 1983, causing about $450,000 ($603,000 at 1994 prices) in damages, resulting in the President declaring Santa Cruz County a disaster area. Flooding in July 1984 caused an additional $200,000 in damages in the Nogales area. Average annual benefits, based on October 1993 price levels, are as follows:

Annual Benefits	Amount
Flood damage prevention	$946,000
Recreation	12,000
Employment	60,000
Other (Emergency, freeboard, bridge replacement, savings in fill, and flood warning)	107,000
Total	$1,125,000

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FISCAL YEAR 1996: The requested amount will be applied as follows:

Planning, Engineering, and Design	$ 75,000
Total	$ 75,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the following requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas.	$ 960,000	$
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	2,540,000	
Pay one-half of the separable costs allocated to recreation and bear all cost of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	4,000	1,000
Pay 5 percent of the costs allocated to flood control, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	496,000	9,000
Total Non-Federal Costs	$4,000,000	$10,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction and reimburse its share of construction costs within a period of 30 years following completion of construction.

Division: South Pacific District: Los Angeles Nogales Wash, Arizona

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STATUS OF LOCAL COOPERATION: Santa Cruz County Flood Control District is the local sponsor. By 25 January 1991 letter, the Santa Cruz County Board of Supervisors expressed its willingness to financially participate in the construction of the project at a level consistent with current cost-shared policy for construction. A Project Cooperation Agreement (PCA) is scheduled to be executed in March 1996.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $6,400,000 is a decrease of $200,000 from the latest estimate ($6,600,000) presented to Congress (FY1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ 88,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	112,000
Total	$200,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) were submitted with the revised Feasibility Report in September 1988. A supplemental EA will not be submitted unless the project, as described in the Final EA, is changed significantly. State certification for Section 404(b)(1) required prior to construction was approved 30 March 1993.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1989, and funds to initiate construction were appropriated in FY 1994. The scheduled completion date of May 1988 last reported to Congress has been changed to "being determined" due to local sponsor difficulty in identifying sources for their share of the project costs, revised OMB passback and unresolved policy issues.

The flood control plan for Nogales Wash recommended in the March 1988 Feasibility Report was approved by the Board of Engineers for Rivers and Harbors 14 September 1988.

The recommended plan for the project was the NED plan and consisted of: (1) lateral collector channels east and west along the U.S. side of the International Boundary to reduce flooding in downtown Nogales and provide 33-year level of protection; (2) the Chula Vista channel to capture breakout flows from Nogales Wash and Potrero Creek and convey them around the Chula Vista/Pete Kitchen community to provide a 100-year level of protection; and (3) flood warning system that would provide advance warning time to the residents of the area. General Services Administration (GSA) is constructing a secondary inspection facility in the same area as the west lateral. GSA and the Corps agreed GSA would undertake construction of the west lateral as a site drainage feature of their project; this portion of the project was reclassified to the "inactive" category. In February 1991, Mexico announced plans to extend Nogales Wash upstream and build a second channel parallel to it, which may obviate the need for the east lateral collector channel. This portion of the project was reclassified to the "deferred" category. The selected plan now consists of: (1) a channel to capture breakout flows from Nogales Wash and Potrero Creek and convey them around the Chula Vista /Pete Kitchen community, and (2) a flood warning system.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Rillito River, Arizona (Continuing)

LOCATION: The project is located in the Tucson metropolitan area, Pima County, Arizona.

DESCRIPTION: The recommended plan for the project is the NED plan and consists of 13.2 miles of soil cement bank protection, 15 grade control structures to control streambed degradation, and recreational development along the Rillito River.

AUTHORIZATION: Energy and Water Development Appropriation Act, 1990

REMAINING BENEFIT - REMAINING COST RATIO: 1.7 to 1 at 8-1/2 percent.

TOTAL BENEFIT-COST RATIO: 1.7 to 1 at 8-1/2 percent.

INITIAL BENEFIT-COST RATIO: 1.05 to 1 at 8-1/2 percent (FY 1994).

BASIS OF BENEFIT-COST RATIO: The benefits are based on the Limited Reevaluation Report dated February 1994 at October 1993 price levels.

SUMMARIZED FINANCIAL DATA			ACCUMULATED PCT OF EST FED COST	STATUS (1 JAN 95)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$25,000,000		Entire Project	40	Jan 1997
Estimated Non-Federal Cost		8,500,000				
Cash Contributions	$1,991,000					
Other Costs	266,000					
Credit in lieu of Cash for Advance Work	6,243,000					
Total Estimated Project Cost		$33,500,000				

Division: South Pacific District: Los Angeles Rillito River, Arizona

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SUMMARIZED FINANCIAL DATA (Continued)

			ACCUMULATED PCT OF EST FED COST
Allocations to 30 September 1994	$ 8,025,000		
Conference Allowance for FY 1995	9,600,000		
Allocation for FY 1995	8,081,000	1/	
Allocations through FY 1995	16,106,000	2/	64
Allocation Requested for FY 1996	4,894,000		84
Programmed Balance to Complete after FY 1996	4,000,000		
Unprogrammed Balance to Complete after FY 1996	0		

1/ Reflects $1,519,000 reduction for savings and slippage.

2/ Reflects $4,000,000 in programmed carryover into FY 1996.

PHYSICAL DATA

Bank Protection: Type - Soil Cement
Length - 13.2 miles
Dimensions - 8 foot horizontal width
slope 1 on 1
Berm width 20 feet

Invert Stabilizers: Type - Soil cement capped with 4 feet rollcrete
Quantity - 15
Dimension - 10-foot top
24-30 foot bottom

Recreation:
Bicycling, jogging, equestrian and biking trails along the banks of the river. Staging and rest areas at the upper and lower end.

Division: South Pacific

District: Los Angeles

Rillito River, Arizona

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JUSTIFICATION: The Rillito River drains an area of about 1,000 square miles and empties into the Santa Cruz River at Tucson. Urban development within the project area, current population over 535,000, is subject to serious flood damage. Seven significant floods occurred from 1962 to 1983 causing serious damage to businesses, residential property, agriculture, and transportation. The flood of record occurred in October 1983 and caused $10 million in damages ($15.2 million at 1994 prices). The February 1993 flood caused bank damage and other topography changes to the Rillito River. Work of an emergency nature in the amount of $2.7 million was performed by the local sponsor in a cost sharing arrangement with the Soil Conservation Service. Average benefits, based on October 1993 price levels, are as follows:

Annual Benefits	Amount
Bank and Channel Stabilization	$1,000,000
Recreation	1,506,000
Total	$2,506,000

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $4,894,000 and $4,000,000, respectively, will be applied as follows:

Continue channel construction	$8,607,000
Construction Management	287,000
Total	$8,894,000

NON-FEDERAL COST: In accordance with the cost-sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavation dredged material disposal areas.	$ 126,000	$
Modify or relocate utilities, roads, bridges (expect railroad bridges), and other facilities where necessary for the construction of the project.	140,000	
Pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, and replacement of recreation facilities.	282,000	4,000
Pay 24 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities, which are partially offset by a credit allowed ($6,243,000) based on prior work (Section 104 of the WRDA 1986).	7,952,000	80,000
Total Non-Federal Costs	$ 8,500,000	$84,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: Pima County Transportation and Flood Control District is the local sponsor. By letter dated 24 February 1994, the sponsor reaffirmed its support and willingness to financially participate in the construction of the project at a level consistent with current cost-shared policy for construction. On 23 June 1994, the Project Cooperation Agreement (PCA) was executed in compliance with the requirements of the Water Resources Development Act of 1986. The current non-Federal cost estimate of $8,500,000 includes a cash contribution of $8,234,000 which is to be partially offset by a credit of $6,243,000 allowed for locally-constructed flood control work determined to be in accordance with Section 104 of the Water Resources Development Act of 1986.

The local sponsor has completed approximately 11 miles (additional to the 13.2 miles authorized) of soil cement bank protection and has been approved for credit for this work under Section 104 of the Water Resources Development Act of 1986 in May 1988. The upper limit is $6,243,000 or 25 percent of the flood control costs, whichever is less.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $25,000,000 is a decrease of $2,000,000 from the latest estimate ($27,000,000) presented to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ 529,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	-2,529,000
Total	$ -2,000,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Final Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) was submitted with the revised Feasibility Report in February 1987. A supplemental EA was included in the Draft Design Memorandum submitted in April 1992.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1987, and funds to initiate construction were appropriated in FY 1994.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Coyote and Berryessa Creeks, California (Continuing)

LOCATION: The project is located in San Jose and Milpitas, Santa Clara County, California.

DESCRIPTION: The recommended project includes offset levees and an overflow channel on Coyote Creek, and two sedimentation basins, concrete lined trapezoidal channel and offset levees on Berryessa Creek. Provisions are also included for fish and wildlife mitigation for both Coyote and Berryessa Creeks.

AUTHORIZATION: Water Resources Development Act of 1990, National Defense Authorization Act for Fiscal Year 1994.

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable for Coyote Creek element because project construction is substantially complete. 2 to 1 at 8-1/2 percent for Berryessa Creek element.

TOTAL BENEFIT-COST RATIO: 2.8 to 1 at 8-1/2 percent for Coyote Creek element and 1.7 to 1 at 8-1/2 percent for Berryessa Creek element.

INITIAL BENEFIT-COST RATIO: 2.8 to 1 at 8-1/2 percent for Coyote Creek element and 1.7 to 1 at 8-1/2 percent for Berryessa Creek element.

BASIS OF BENEFIT-COST RATIO: Benefits for Coyote Creek are from General Design Memorandum dated May 1993, and approved August 1994 at October 1993 price level. Benefits for Berryessa Creek are from an economic analysis prepared in January 1990 at October 1989 price level.

SUMMARIZED FINANCIAL DATA		
Coyote Creek Element		
Estimated Federal Cost		$29,650,000
Estimated Non-Federal Cost		$32,350,000
Cash Contribution	$ 3,090,000	
Other Costs	51,440,000	
Reimbursements/Credits	-22,180,000	

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Coyote Creek	70%	Sep 1997
Berryessa Creek	Not started	Unscheduled
Entire Project	35% 1/	Unscheduled

1/ Reflects work completed by local sponsor as creditable work to the project (see STATUS OF LOCAL COOPERATION.)

Division: South Pacific District: Sacramento Coyote and Berryessa Creeks, California

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Section 104 - $ 8,633,000		
Section 26 - 3,000,000		
Section 215 - 3,000,000		
50/50 Reimb - 7,547,000		
Total Coyote Creek Element		$ 62,000,000
Berryessa Creek Element		
Estimated Federal Cost		$12,200,000
Estimated Non-Federal Cost		$ 4,000,000
Cash Contribution	$ 1,840,000	
Other Costs	2,160,000	
Total Berryessa Creek Element		$16,200,000
Project Summary		
Estimated Federal Cost		$41,850,000
Estimated Non-Federal Cost		$36,350,000
Cash Contribution	$ 4,930,000	
Other Costs	53,600,000	
Reimbursements/Credits	-22,180,000	
Section 104 - $ 8,633,000		
Section 26 - 3,000,000		
Section 215 - 3,000,000		
50/50 Reimb - 7,547,000		
Total Estimated Project Cost		$ 78,200,000

ACCUM.
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FED COST

PHYSICAL DATA

SUMMARIZED FINANCIAL DATA (Continued)

Division: South Pacific District: Sacramento Coyote and Berryessa Creeks, California

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Allocations to 30 September 1994	$10,510,000		Coyote Creek	
Conference Allowance for FY 1995	12,000,000		Offset levees and	
Allocation for FY 1995	8,700,000 1/		Overflow channel	22,000 feet
Allocations through FY 1995	19,210,000	46		
			Berryessa Creek	
Allocations Requested for FY 1996	12,000,000	75	Sedimentation basins	two
Programmed Balance to Complete after FY 1996	10,640,000		Concrete lined channel	16,400 feet
Unprogrammed Balance to Complete after FY 1996	0		Offset levees	4,800 feet

1/ Reflects $1,899,000 reduction assigned as savings and slippage and $1,401,000 reprogrammed from the project.

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JUSTIFICATION: The project is necessary for flood protection for a densely populated and highly industrialized area within the Santa Clara Valley. Current populations for the two principal cities, San Jose and Milpitas, are 836,000 and 58,000 respectively. The area also includes multiple large industrial complexes. Coyote Creek drains an area of about 350 square miles and the Berryessa Creek drainage basin covers about 22 square miles. The December 1955 maximum flood of record on Coyote Creek would cause damages of over $9.9 million (October 1993 prices). The most recent flood in February 1983 caused over $6 million in damages to Coyote Creek and Alviso residents were forced to evacuate their homes (see OTHER INFORMATION). Damages to residential and commercial/industrial properties due to overbank flooding on Berryessa Creek also occurred. To accelerate the project, the local sponsor has already completed integral construction on Reaches 1 and 2 on Coyote Creek. The sponsor also awarded a contract on 17 October 1994 to proceed with additional integral project construction on Reach 3. The completed project will provide a 100 year level of protection. Average annual benefits, all flood control, are estimated at $19 million at October 1993 price levels for Coyote Creek and $2.1 million at October 1989 price levels for Berryessa Creek.

FISCAL YEAR 1996: The requested amount will be applied as follows:

Coyote Creek	
Continue fish and wildlife mitigation work	$ 40,000
Complete Federal review of project lands	98,000
Planning, Engineering and Design for Coyote Creek	120,000
Planning, Engineering and Design for Berryessa Creek	500,000
Construction Management	20,000
Sponsor Credit for Coyote Creek	
Initiate 50/50 reimbursement to non-Federal sponsor	6,797,000
Initiate and complete sponsor credit for integral work on Reach 3, Sec 215 FC Act of 1968	3,000,000
Complete sponsor credit for integral work on Reach 2, Sec 26 of WRDA 88	1,425,000
Total	$ 12,000,000

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NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986 the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Coyote Creek		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas, which may be reduced for credit allowed based on prior work (Section 104 of the Water Resources Development Act of 1986 ($8,633,000), Section 26 of the Water Resources Development Act of 1988 (not to exceed $3,000,000) and Section 215 of the Flood Control Act of 1968 (not to exceed $3,000,000) after reductions for such credit have been made in the required cash payments.	$17,240,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, and perform prior work under Section 104 of the Water Resources Development Act of 1986, Section 26 of the Water Resources Development Act of 1988, and Section 215 of the Flood Control Act of 1968, where necessary for the construction of the project.	19,567,000	
Pay 5 percent of the costs allocated to flood control, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	3,090,000	332,000
Federal reimbursement to non-Federal sponsor for one-half of the non-Federal costs allocated to flood control in excess of Federal costs.	- 7,547,000	
Coyote Creek Total	$32,350,000	$332,000

NON-FEDERAL COST (Continued)

Berryessa Creek

Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$ 1,740,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	420,000	
Pay 11.4 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	1,840,000	105,000
Berryessa Creek Total	$ 4,000,000	$105,000
Total Non-Federal Costs	$36,350,000	$437,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION:

The Project Cooperation Agreement for the Coyote Creek projct element was executed in August 1994. The sponsor applied for and will receive credit in the amount of $8,633,000 for completed Coyote Creek work under Section 104 of Water Resources Development Act of 1986. Sponsor has completed construction of Coyote Creek Reach 2 integral work under Section 26 of Water Resources Development Act of 1988 with credit not to exceed $3,000,000. Sponsor has initiatd construction of Coyote Creek Reach 3A integral work under Section 215 of the Flood Control Act of 1968, as amended, with credit not to exceed $3,000,000. Berryessa Creek PCA execution is currently unacheduled.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $41,850,000 reflects a decrease of $20,650,000 from the latest estimate submitted to Congress (FY 1995). The current cost estimate includes changes in the following items:

Item	Amount
Price Escalation on Construction Features	$ -360,000
Post Contract Award and other Estimating Adjustments (including contingency adjustments) - Coyote Creek	-340,000
Adjustments to 50/50 reimbursement and required cash contribution due to decreased Coyote Creek sponsor lands values	-19,950,000
Total	-$ 20,650,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final EIS for both Coyote and Berryessa Creeks was filed with EPA on 8 July 1988. An Environmental Assessment/Finding of No Significant Impact (EA/FONSI) was reached on the Coyote GDM dated May 1993.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1988.

Water Resources Development Act of 1986 authorized planning, engineering and design only. Water Resources Development Act of 1990 authorized construction.

The Environmental Protection Agency (EPA) has listed the asbestos-contaminated temporary ring levee and other areas of the community of Alviso as a Superfund site. Removal of the ring levee is governed by a consent decree effective in October 1991. The consent decree requires the City of San Jose to remove the ring levee no later than 31 August 1995 and provide for wetlands mitigation and restoration. In July 1993, a suitable disposal site became available and the ring levee was removed and replaced with clean material in coordination with EPA and the Corps. Work was completed in December 1993. However, the consent decree is still in effect in that it stipulates that the replacement levee be removed by 31 August 1995.

The National Defense Authorization Act for Fiscal Year 1994 directed the Secretary to construct the project notwithstanding Section 902 of the Water Resources Development Act 1986.

OTHER INFORMATION (Continued)

Berryessa Creek design document is currently under preparation. Early indications are that the cost estimate is likely to increase. The Corps is working with the sponsor to refine project scope to address environmental/aesthetic and cost concerns prior to submitting the design document for approval.

Benefit-cost ratio previously submitted to Congress for Coyote Creek was 1.6 to 1. Current benefit-cost ratio is 2.8 to 1, largely due to a substantial decrease in lands values.

Construction contract for Coyote Creek Reach 3B was awarded on 27 September 1994.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Guadalupe River, California (Continuing)

LOCATION: The project is located in San Jose, Santa Clara County, California.

DESCRIPTION: The authorized plan consists of channel improvements on the Guadalupe River between Interstate Highways 880 and 280, a distance of approximately 2.5 miles with provisions for fish and wildlife mitigation as necessary. The project under construction is the Locally Preferred Plan (LPP). The non-Federal sponsor is responsible to pay 100 percent of the difference in cost between the LPP and the NED plan.

AUTHORIZATION: Water Resources Development Act of 1986, Energy and Water Development Appropriations Act for 1990, and Energy and Water Development Appropriations Act for 1992.

REMAINING BENEFIT-REMAINING COST RATIO: 4.5 to 1 at 8-5/8 percent.

TOTAL BENEFIT-COST RATIO: 2.4 to 1 at 8-5/8 percent.

INITIAL BENEFIT-COST RATIO: 2.2 to 1 at 8-5/8 percent (FY 1990)

BASIS OF BENEFIT-COST RATIO: Benefits are from General Design Memorandum dated December 1991 at October 1991 price levels for the NED project.

SUMMARIZED FINANCIAL DATA			
Estimated Federal Cost			$ 63,300,000
Estimated Non-Federal Cost			74,470,000
Cash Contribution		$ 10,910,000	
Other Costs		79,241,000	
Reimbursements		-15,681,000	
Section 104	-$ 5,701,000		
50/50	- 9,980,000		
Total Estimated Project Cost			$137,770,000

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	40%	Being determined

PHYSICAL DATA	
Concrete channel	1,510 Feet
Earth channel	27,055 Feet
Box culverts	2,535 Feet
Concrete gabions & mats	4,655 Feet
Excavated bench	6,250 Feet
Gabion terraces	4,130 Feet
Recreation trails	17,500 Feet
Recreation riverwalk	13,350 Feet
Concrete retaining walk	1,920 Feet

Division: South Pacific District: Sacramento Guadalupe River, California

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SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 1994	$ 24,177,000	
Conference Allowance for FY 1995	10,000,000	
Allocation for FY 1995	6,073,000 1/	
Allocations through FY 1995	30,250,000	48
Allocation Requested for FY 1996	8,100,000	61
Programmed Balance to Complete After FY 1996	24,950,000	
Unprogrammed Balance to Complete After FY 1996	0	

1/ Reflects $1,583,000 reduction assigned as savings and slippage, and $2,344,000 reprogrammed from the project.

JUSTIFICATION: The Guadalupe River drains an area of about 160 square miles and its 100-year flood plain encompasses approximately 7,000 acres, including downtown San Jose, and consists of both residential and light industrial development. The 1994 population for the city of San Jose was estimated at 836,000. Flood producing storms have occurred thirteen times since 1945, the most recent in February 1986. The storm of record occurred in December 1955, inundating 8,300 acres and causing approximately $1.3 million in damages in the Guadalupe River drainage basin. Damages from a 100 year flood under 1993 conditions and prices would be approximately $560 million. The project will provide 100-year flood protection to downtown San Jose, including approximately 1,020 commercial, industrial, and public structures, 3,270 private residences, four major traffic arteries, and the San Jose International Airport. Average annual benefits at October 1991 price levels are as follows:

Annual Benefits	Amount
Flood Damage Prevention	$24,210,000
Recreation	3,660,000
Total	$27,870,000

FISCAL YEAR 1996: The requested amount will be used as follows:

Initiate Fish Wildlife Mitigation from Coleman Avenue to New Julian Street	$ 50,000
Initiate Channel and Recreation Construction from Coleman Avenue to New Julian Street	110,000
Initiate Fish & Wildlife Mitigation Monitoring from New Julian Street to Park Avenue	100,000
Initiate Channel and Recreation Construction from New Julian Street to Park Avenue	3,355,000
Initiate Cultural Resources Contract 3	316,000
Continue Real Estate Certification	52,000
Complete Fish & Wildlife Mitigation from Hedding Street to Coleman Avenue	219,000
Planning, Engineering, and Design	135,000
Construction Management	1,223,000
Partial Reimbursement to Sponsor for flood control costs in Excess of 50%	2,540,000
Total	$8,100,000

Division: South Pacific District: Sacramento Guadalupe River, California

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NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986 the non-Federal sponsor must comply with the requirements listed below (Also see OTHER INFORMATION):

	Annual	
Requirements of Local Cooperation	Payments During Construction and Reimbursements	Operation Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas, which are partially offset by a credit allowed ($5,701,000) for prior work (Section 104 of the WRDA 1986).	$47,949,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary in the construction of the project.	25,591,000	
Pay 5 percent of the costs allocated to flood control and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	6,190,000	$1,300,000
Pay the incremental construction costs for the locally preferred plan.	3,850,000	
Pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	870,000	1,050,000
Federal reimbursement to non-Federal sponsor for one-half of the non-Federal costs allocated to flood control in excess of Federal costs.	- 9,980,000	
Total Non-Federal Costs	$74,470,000	$2,350,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

Division: South Pacific District: Sacramento Guadalupe River, California

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STATUS OF LOCAL COOPERATION: The Santa Clara Valley Water District is the local sponsor for both the flood control portion and the recreation portion of this project. The Local Cooperation Agreements (LCA's) were executed 30 March 1992. The current non-Federal cost estimate of $74,470,000 which includes a cash contribution of $10,910,000 is the same non-Federal cost estimate presented in the Local Cooperation Agreement, which included a cash contribution for $12,200,000. The Santa Clara Valley Water District has applied for credit in the amount of $28,400,000 for completed work under Section 104 of WRDA 1986. The Section 104 Credit Evaluation Report recommends $5,700,000 and was reflected in the flood control LCA. Reimbursement of Section 104 credits was initiated in FY 1993 and was completed FY 1994 after initiation of a majority of the project construction. Total non-Federal costs are anticipated to exceed 50% of the costs allocated to flood control. Reimbursement for those excess costs was initiated in FY 1994 and will continue as the project is being constructed. The sponsor continues to be financially able to support the project.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $63,300,000 is an increase of $2,100,000 from the latest estimate ($61,200,000) presented to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ -107,000
Design Changes	472,000
Post Contract Award and Other Estimating Adjustments	1,735,000
Total	$2,100,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement (FEIS) was filed in October 1986. Environmental assessments (EA's) have been circulated for public review and comment on the changes to the Feasibility report and FEIS. Results of the review were included in the December 1991 General Design Memorandum (GDM) and Record of Decision was filed with EPA on 12 February 1992.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in FY 1986 and funds to initiate construction were appropriated in FY 1990. The scheduled completion date is being determined.

The Energy and Water Development Appropriations Act, 1990, directed the Secretary to construct the project notwithstanding Section 902 of the Water Resource Development Act 1986.

The Energy and Water Development Appropriations Act, 1992, directed the Secretary to modify and construct the project in accordance with the January 1991 GDM. While the current plan being implemented differs slightly from the January 1991 GDM Plan, it is consistent with the Guadalupe River Park plan requested by the local sponsor and with cost sharing policy.

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The Locally Preferred Plan (LPP) is a plan that is a locally acceptable engineering modification of the authorized plan presented in the July 1985 Feasibility Report/Environmental Impact Statement. It is also the basis for the larger, locally developed, Guadalupe River Park (GRP) Plan. The GRP is a major part of the City of San Jose's current redevelopment plan for the downtown area. The local sponsor, Santa Clara Valley Water District, has agreed to cost share the project in proportion to the National Economic Development Plan (NED), pay all incremental construction costs associated with the LPP, and one-half of the recreation costs.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Los Angeles County Drainage Area, California (Continuing)

LOCATION: The project covers a 2,000 square-mile area within the county of Los Angeles and includes portions of the metropolitan region of the city of Los Angeles.

DESCRIPTION: The project consists of upgrading the existing system and includes raising and converting channel walls of the Rio Hondo and lower Los Angeles River channels and modifying bridges.

AUTHORIZATION: Water Resources Development Act of 1990, subject to approval of the Feasibility Report by the Assistant Secretary of the Army for Civil Works.

REMAINING BENEFIT - REMAINING COST RATIO: 1.6 to 1 at 8 percent.

TOTAL BENEFIT-COST RATIO: 1.6 to 1 at 8 percent.

BASIS OF BENEFIT-COST RATIO: Benefits are from the Final Feasibility Report revised June 1992, at October 1991 price levels.

SUMMARIZED FINANCIAL DATA			ACCUMULATED PCT OF EST FED COST	STATUS (1 JAN 95)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$283,000,000		Entire Project	Not Started	Being Determined
Estimated Non-Federal Cost		177,000,000				
Cash Contributions	$ 23,000,000					
Other Cost	154,000,000					
Total Estimated Project Cost		$460,000,000				
Allocations to 30 September 1994		$ 7,554,000				
Conference Allowance for FY 1995		3,000,000				
Allocation for FY 1995		2,896,000	1/			
Allocations through FY 1995		10,450,000	4			
Allocation Requested for FY 1996		11,367,000	8			
Programmed Balance to Complete after FY 1996		$261,183,000				

1/ Reflects $483,000 reduction assigned as savings and slippage and $379 reprogrammed to the project.

South Pacific Division Los Angeles District Los Angeles County Drainage Area, CA

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PHYSICAL DATA

CHANNELS
Parapet walls - approximately 21 miles
Rio Hondo, Whittier Narrows Dam to Los Angeles River - 9 miles
Los Angeles River, Rio Hondo to ocean -12 miles
Converting trapezoidal channel to rectangular
channel - approximately 1.2 miles Rio Hondo -.7 miles
Los Angeles River -.5 miles

Armoring backslopes of levees
Rio Hondo
Compton Creek
Los Angeles (Atlantic Boulevard to ocean)

BRIDGES - Modify 27 on Los Angeles River

JUSTIFICATION: Los Angeles County Drainage Area, current population of over 9 million, is partially protected by an urban flood control system which includes Corps flood control structures consisting of 5 major reservoirs, 22 debris basins, and 470 miles of channel improvements. The existing system, protecting the second largest urban metropolitan area in the United States, has prevented over $3.7 billion in damages since construction. However, the flood of 1969 in Los Angeles County caused widespread damages of over $12 million, $52.6 million at 1994 prices. As urbanization of the basin has grown over the past 40 years, the ability of the existing systems to provide design levels of protection has diminished. The February-March 1980 floods exceeded the capacity of the channel in the upper reaches of the Los Angeles River and very nearly overtopped the levee in the lower Los Angeles River near the city of Long Beach. Breach in the levee could have induced catastrophic damages to residential, commercial, and industrial properties in Long Beach. Studies to date indicate that a 100-year flood would impact 52,000 acres, with damages totaling about $2.25 billion. Portions of the existing system cannot contain a 50-year flood event. Average annual benefits, at October 1991 price levels, are $59,513,000, all flood control.

FISCAL YEAR 1996: The requested amount will be applied as follows:

Complete Construction of Compton Creek	$ 5,085,000
Initiate Construction of Parapet Walls	3,584,000
Planning, Engineering and Design	2,325,000
Construction Management	373,000
Total	$11,367,000

NON-FEDERAL COST: In accordance with the cost-sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

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		Annual
Requirements of Local Cooperation	Payment During Construction and Reimbursements	Operation, Maintenance, and Replacement Costs
Provide lands, easements, rights-of-ways, and borrow and excavated or dredging disposal areas. (Requirement under sponsor's ownership)	$ 10,205,000	$
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	143,795,000	
Pay 5 percent of the costs allocated to flood control and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	23,000,000	70,000
Total Non-Federal Costs	$177,000,000	$70,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The Los Angeles County Department of Public Works is the local sponsor. In February 1992, the local sponsor reaffirmed its support and willingness to financially participate in the construction of the project at a level consistent with the current cost-sharing policy for construction. The Project Cooperation Agreement is scheduled to be executed March 1995.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $283,000,000 is an decrease of $12,000,000 from the latest estimate ($295,000,000) presented to Congress (FY 1995). This change is due to a decrease in the inflation allowance for construction features.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Impact Statement (EIS) was publicly reviewed and submitted as part of Final Feasibility Report. The Record of Decision (ROD) has not yet been recorded by the Assistant Secretary of Army for Civil Works. The EIS is not final until the ROD is obtained. A supplemental Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) were prepared for the 1st construction feature (Compton Creek) to reflect an additional 1,000 feet of levee armoring. The FONSI was signed in October 1993. The local sponsor is preparing the Environmental Impact Report (EIR) to meet California Environmental Quality Act requirements. The EIR is scheduled for completion February 1995.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1992, and funds to initiate construction were Appropriated in FY 1995.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Marysville/Yuba City Levee Reconstruction, CA (Continuing)

LOCATION: The project is located within the boundaries of the Sacramento River Flood Control System in Butte, Sutter and Yuba Counties in north-central California. The area includes the Feather and Yuba Rivers and their tributaries, Sutter Bypass and the cities of Marysville and Yuba City and the communities of Linda and Olivehurst.

DESCRIPTION: An evaluation of about 134 miles of the Sacramento River Flood Control Project levees in the Marysville/Yuba City area identified about 22 miles of levees as being structurally deficient. The project consists of reconstructing those levees by installing about 17 miles of toe drains, installing about four miles of slurry cut-off walls and backfilling about one mile of a drainage ditch to rectify the deficiency. The project also consists of about ten miles of restoring levee heights and about 76 acres for fish and wildlife mitigation.

AUTHORIZATION: Flood Control Acts of 1917, 1928, and 1941; River and Harbor Act of 1937.

REMAINING BENEFIT-REMAINING COST RATIO: 12.6 to 1 at 8-3/4 percent.

TOTAL BENEFIT-COST RATIO: 9.1 to 1 at 8-3/4 percent.

INITIAL BENEFIT-COST RATIO: 3.2 to 1 at 8-3/4 percent (FY 1993).

BASIS OF BENEFIT-COST RATIO: Initial benefits are from the Sacramento River Flood Control System Evaluation - Marysville/Yuba City Area Budget Decision Document dated February 1991 and revised in May 1991 at 1990 price levels. Current benefits are from the Sacramento River Flood Control Project, California, Marysville/Yuba City Area, Phase 2 final Design Memorandum dated January 1993, revised April 1993 and approved in May 1994 at 1992 price levels.

SUMMARIZED FINANCIAL DATA			STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$ 23,300,000	Entire Project	Not Started	Being Determined
Estimated Non-Federal Cost		7,700,000			
Cash Contribution	$ 1,800,000				
Other Costs	5,900,000				
Total Estimated Project Cost		$31,000,000			

Division: South Pacific District: Sacramento Marysville/Yuba City Levee Reconstruction, California

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SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM. PCT. OF EST. FED COST
Allocations to 30 September 1994	$ 2,937,000	
Conference Allowance for FY 1995	3,000,000	
Allocation for FY 1995	2,700,000 1/	
Allocations through FY 1995	5,637,000	24
Allocation Requested for FY 1996	$ 6,000,000	50
Programmed Balance to Complete After FY 1996	11,663,000	

PHYSICAL DATA

Levee Reconstruction:	
Toe Drains	- 10 miles
Toe Drains and Levee Height Restoration	- 7 miles
Cut-Off Walls	- 4 miles
Levee Height Restoration	- 3 miles
Fish and Wildlife Mitigation	- 76 acres

1/ Reflects $475,000 reduction assigned as savings and slippage and $175,000 reprogrammed to the project.

JUSTIFICATION: Levee evaluation studies of approximately 134 miles of project levees have been completed in the Marysville and Yuba City area. Results indicate that structural problems caused by ongoing seepage and subsidence exist on about 22 miles of levees with inadequate levee height existing on about 10 miles of those levees. Reconstruction will be required to maintain the integrity of the existing Sacramento River Flood Control Project. The project will assure the system continues to function as designed. The levees were locally constructed and incorporated into the project levee system when it was authorized in 1917. High flow conditions during the February 1986 storm event resulted in a levee break on the Yuba River, the evacuation of about 24,000 people and about $95 million in flood damages. Additional flood damages of about $2 million were incurred on the Feather and Bear Rivers and about $1 million in post flood levee repair work was required. The levee system protects about 100,000 people in the Marysville/Yuba City area. Levee failure would result in significant property damages and potential loss of life. The counties of Sutter and Yuba qualify as areas of substantial and persistent unemployment. Average annual benefits, all flood control, are estimated at $25,530,000 at October 1992 price levels.

FISCAL YEAR 1996: The requested amount of $6,000,000 will be applied as follows:

Initiate Construction of Contract 2 (Marysville/Yuba City)	$3,826,000
Continue Fish & Wildlife Mitigation Planting Contract	446,000
Complete Construction of Contract 1 (Marysville)	418,000
Certification of non-Federal Lands	161,000
Planning, Engineering and Design	325,000
Construction Management	824,000
Total	$6,000,000

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NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$ 3,970,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	1,930,000	
Pay 6 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	1,800,000	$ 0 1/
Total Non-Federal Costs	$ 7,700,000	$ 0

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

1/ Reconstruction will reduce, not increase, annual operation and maintenance costs. Operation and maintenance costs are included in the original Sacramento River Flood Control Project and are the responsibility of the non-Federal interests.

STATUS OF LOCAL COOPERATION: The California State Reclamation Board is the local sponsor for reconstruction work. A Project Cooperation Agreement satisfying the requirements of Section 221, Flood Control Act of 1970 (Public Law 91-611) and consistent with the Water Resources Development Act of 1986 (Public Law 99-662) was signed on 19 July 1994.

Division: South Pacific District: Sacramento Marysville/Yuba City Levee Reconstruction, California

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COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $23,300,000 is a decrease of $400,000 from the latest estimate ($23,700,000) presented to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ -400,000
Total	$ -400,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The original Sacramento River Flood Control Project was substantially complete prior to 1970 and an Environmental Impact Statement (EIS) was not prepared. The final Programmatic Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for this, the Mid-Valley area, Lower Sacramento area and Upper Sacramento area, the remaining three phases of the Sacramento River Flood Control System Evaluation, was filed with EPA on 19 June 1992 and the Record of Decision was signed on 4 November 1992. The Programmatic EIS/EIR discusses the environmental impacts resulting from potential work for the entire area in general terms. An Environmental Assessment (EA) was prepared to address the site-specific impacts resulting from the recommended work in the Marysville/Yuba City area in December 1992. A Finding of No Significant Impacts (FONSI) was signed on 28 April 1993.

OTHER INFORMATION: Funds to initiate engineering and design were appropriated in FY 1991 (Sacramento River Flood Control Project, California) and funds to initiate construction were appropriated in FY 1993.

A final Design Memorandum was prepared in January 1993, revised April 1993 and approved in May 1994.

APPROPRIATION TITLE: Construction, General - Reservoirs (Flood Control)

PROJECT: Merced County Streams, California (Continuing)

LOCATION: The project is located in Merced County in the vicinity of the city of Merced, California, on the streams draining from the Mariposa County foothills of the Sierra Nevada into Merced County. The streams lie easterly of, and drain into, the San Joaquin River between Chowchilla River on the south and Merced River on the north. Castle Dam and Lake, the first element of the project constructed, is located on Canal Creek, about eight miles northwest of Merced.

DESCRIPTION: The project consists of increasing the flood control storage in the existing Bear Reservoir from 7,700 acre feet to 32,500 acre-feet, construction of a 40 foot high earthfill dam at the Castle Site with 6,400 acre-feet of flood control storage, and construction of a 78 foot high earthfill dam at the Haystack Site with 5,300 acre-feet of flood control storage. There will also be 33.4 miles of levee construction and channel modifications on Bear, Fahrens, and Black Rascal Creeks and a water management system for 2,859 acres for fish and wildlife mitigation.

AUTHORIZATION: 1970 Flood Control Act.

REMAINING BENEFIT - REMAINING COST RATIO: 1.17 to 1 at 8-1/8 percent.

TOTAL BENEFIT-COST RATIO: 1.06 to 1 at 8-1/8 percent.

INITIAL BENEFIT - COST RATIO: 1.16 to 1 at 8-1/8 percent (FY 1985).

BASIS OF BENEFIT-COST RATIO: Benefits are based on the Phase II General Design Memorandum approved in June 1982 at 1981 price levels.

Division: South Pacific District: Sacramento Merced County Streams, California

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SUMMARIZED FINANCIAL DATA				ACCUM. PCT. OF EST. FED. COST
Estimated Federal Cost			$ 85,900,000	
Programmed Construction		$18,226,000		
Unprogrammed Construction		67,674,000		
Estimated Non-Federal Cost			$ 38,600,000	
Programmed Construction		$ 5,000,000		
Cash Contribution	$ 530,000			
Other Costs	4,470,000			
Estimated Non-Federal Cost				
Unprogrammed Construction		$33,600,000		
Cash Contribution	$ 5,870,000			
Other Costs	27,730,000			
Total Estimated Programmed Construction Cost			$ 23,226,000	
Total Estimated Unprogrammed Construction Cost			101,274,000	
Total Estimated Project Cost			124,500,000	
Allocations to 30 September 1994			$ 14,849,000	
Conference Allowance for FY 1995			830,000	
Allocation for FY 1995			699,000 1/	
Allocations through FY 1995			15,548,000	18
Allocation Requested for FY 1996			700,000	19
Programmed Balance to Complete After FY 1996			1,600,000	
Unprogrammed Balance to Complete After FY 1996			68,052,000	

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Castle Dam and Lake	100	Jan 1994
Remaining Project	Not Started	Indefinite
Entire Project	15	Indefinite

1/ Reflects $131,000 reduction assigned as savings and slippage.

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PHYSICAL DATA

Castle Dam and Lake

Dam: Type - Impervious Core
Height - 40 feet
Length - 2,050 feet

Dikes: Type - Homogeneous
earthfill Length - 1,050 feet

Spillway: Type - Ungated,
concrete low ogee spillway
Crest width - 180 feet
Capacity - 3,900 c.f.s.

Lake Capacity: Flood Control
storage - 6,400 ac-ft

Lands and Damages: Acres - 1,219
Type - grazing and orchards
Improvements - Rural dwellings
and ranch buildings

Bear Dam and Lake

Dam: Type - Impervious Core
Height - 150 feet
Length - 3,100 feet

Spillway: Type - Ungated ogee converging to
spillway with stilling basin
Crest width - 185 feet converging to 120 ft
Capacity - 27,000 c.f.s.

Lake Capacity: Flood Control
storage - 32,500 ac-ft

Lands and Damages: Acres - 310
Type - grazing
Improvements - None

Bear Creek Stream Group
Channels: 33.4 miles
Levees:
Height - 3 to 10 feet
Length - 58 miles

Haystack Dam and Lake

Dam: Type - Homogeneous Fill
Height - 78 feet
Length - 2,300 feet

Spillway: Type - Ungated,
concrete, low ogee spillway
Crest width - 200 feet
Capacity - 4,600 c.f.s.

Lake Capacity: Flood Control
storage - 5,300 ac-ft

Lands and Damages: Acres - 682
Type - grazing
Improvements - None

Fish & Wildlife Mitigation
Acres - 2,859

Division: South Pacific
District: Sacramento
Merced County Streams, California

JUSTIFICATION: The project will provide flood protection to residential, commercial, and agricultural lands within and adjacent to the city of Merced and Castle Air Force Base. The population of Merced County was 90,440 in 1960, has increased to 198,800, and is expected to reach 236,000 by 2000. Rapid urbanization is increasing the severity of serious flooding problems that exist along the streams draining from the Sierra Nevada into Merced County. The 1993 value of physical improvements in the 73,700 acre area protected by the project is estimated to be in excess of $2.71 billion. During the January-February 1969 floods, about 24,000 acres were flooded, with damages of $940,000 reported. With recurrence of that flood under current prices, damages would amount to about $3.8 million. The average annual benefits at 1981 price levels are as follows:

Annual Benefits	Amount
Flood Control	$7,180,000
General Recreation	225,000
Area Redevelopment	625,000
Total	$8,030,000

FISCAL YEAR 1996: The requested amount will be applied as follows:

Planning, Engineering and Design for Remaining Project	$ 700,000
Total	$ 700,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Castle Dam		
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal area.	$ 4,470,000	
Pay 5 percent of the costs allocated to flood control and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	530,000	$ 57,200
Total Castle Dam Non-Federal Costs	$ 5,000,000	$ 57,200

NON-FEDERAL COSTS (Continued)

Remaining Project

Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas.	$15,230,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	12,460,000	
Pay one-half of the separable cost allocated to recreation and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities. (Payments include $40,000 for lands)	270,000	$ 43,000
Pay 5 percent of the costs allocated to flood control and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	5,640,000	603,800
Total Remaining Project Non-Federal Costs	$33,600,000	$646,800
Total Non-Federal Costs	$38,600,000	$704,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

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STATUS OF LOCAL COOPERATION: The California Reclamation Board (Flood Control) and the City of Merced (Recreation) are the local sponsors of the authorized project. The Reclamation Board serves as the sole sponsor for the Castle Dam unit. Merced County provides a percentage of the non-Federal costs to the Reclamation Board, as specified by applicable State Water Code. On 27 June 1986 a Local Cooperation Agreement for Castle Dam unit was signed in compliance with the requirements of the Supplemental Appropriations Act of 1985. State of California legislation (AB3369) was enacted on 14 September 1986 which enabled the Reclamation Board to use appropriated funds for acquisition of project lands, easements, rights-of-way and relocations and to loan funds to Merced County to pay their portion of these requirements in accordance with cost sharing and financing concepts subsequently reflected in the Water Resources Development Act of 1986. A new Local Cooperation Agreement for Castle Dam in compliance with the Water Resources Development Act of 1986 was signed by the Assistant Secretary of the Army 30 November 1988. The current non-Federal cost estimate for Castle Dam of $5,000,000, which includes a cash contribution of $530,000, is an increase of $2,630,000 from the non-Federal cost estimate of $2,370,000 noted in the Local Cooperation Agreement, which included a cash contribution of $430,000. The increase is due to revalued lands costs and a judgment award on Crane land litigation with additional lands and interest costs partially offset by deletion of requirements for Pacific Gas and Electric relocations and adjustments in inflation during construction. The local sponsor is financially capable and willing to contribute the increased non-Federal share. Our analysis of the non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for continuing to meet its financial commitment.
(See OTHER INFORMATION)

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $85,900,000 is an increase of $2,500,000 from the latest estimate ($83,400,000) submitted to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ 1,811,000
Design Changes	740,000
Post Contract Award and Other Estimating Adjustments	-51,000
Total	$ 2,500,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement was filed on 25 September 1981. A Supplemental Environmental Impact Statement is being developed for the remaining portion of the project.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in FY 1973 and funds to initiate construction were appropriated in the FY 1985 Supplemental Appropriations Act.

The California Reclamation Board and the Merced County Board of Supervisors have indicated support for the balance of the project through Letters of Intent dated 29 August 1991 and 20 August 1991, respectively. Upon completion of design and negotiation of cost sharing arrangements for the remainder of the project, the Project Cooperation Agreement could be executed in FY 1998.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Sacramento River Bank Protection Project, California (Continuing)

LOCATION: The project is located in north-central California, along the Sacramento River and its principal tributaries from Sacramento River RM 0.0 at Collinsville to Chico Landing at RM 194. It is within the limits of the existing Sacramento River Flood Control Project levees and includes Butte Basin, Cache Slough, and a portion of the Sacramento-San Joaquin Delta sloughs.

DESCRIPTION: The project provides a long-range program of bank protection to protect the levees within the limits of the Sacramento River Flood Control Project from erosion. It prevents undermining of levee sections and includes fish and wildlife mitigation features. Some recreational facilities have been provided along the river.

AUTHORIZATION: Flood Control Act of 1960; River Basin Monetary Authorization Act of 1974; Further Continuing Appropriations Act of 1983; and Water Resources Development Act of 1986.

REMAINING BENEFIT-REMAINING COST RATIO: The remaining benefit-remaining cost ratio for all project elements is not applicable because monetary benefits have not been quantified. In the reevaluation of project benefits for the Second Phase report, it was determined impractical to assign a monetary value to the benefits which would result from the removal of threats of eventual levee breaks when there are hundreds of vulnerable locations in various states of deterioration. Therefore, a project benefit-cost ratio was not included in the report submitted to the Congress on the advisability for remaining work.

TOTAL BENEFIT-COST RATIO: Not Applicable

INITIAL BENEFIT-COST RATIO: Not Reported

BASIS OF BENEFIT-COST RATIO: Not Applicable

SUMMARIZED FINANCIAL DATA

Pre Separable Element Work (Contracts 1-37, 38A and 39)

Estimated Federal Cost		$55,380,000
Programmed Construction	$ 54,205,000	
Unprogrammed Construction	1,175,000	

SUMMARIZED FINANCIAL DATA (Continued)

Estimated Non-Federal Cost			$27,690,000
Programmed Construction		$ 27,115,000	
Cash Contribution	$12,025,000		
Other Costs	15,090,000		
Estimated Non-Federal Cost			
Unprogrammed Construction		$575,000	
Cash Contribution	$575,000		
Other Costs	0		
Total Estimated Programmed Construction Cost			$81,320,000
Total Estimated Unprogrammed Construction Cost			$ 1,750,000
Total Pre-Separable Element			$83,070,000
Separable Element 38B			
Estimated Federal Cost			$ 3,088,000
Estimated Non-Federal Cost			$ 1,030,000
Cash Contribution		$ 931,000	
Other Costs		99,000	
Total Separable Element 38B			$ 4,118,000
Separable Element 40			
Estimated Federal Cost			$13,710,000
Estimated Non-Federal Cost			$ 4,570,000
Cash Contribution		$ 3,200,000	
Other Costs		1,370,000	
Total Separable Element 40			$18,280,000

Divisic : South Pacific District: Sacramento Sacramento River Bank Protection Project, California

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SUMMARIZED FINANCIAL DATA (Continued)

Separable Element 41			
Estimated Federal Cost			$ 9,250,000
Estimated Non-Federal Cost			$ 3,080,000
Cash Contribution		$ 2,130,000	
Other Costs		950,000	
Total Seperable Element 41			$12,330,000
Separable Element 42			
Estimated Federal Cost			$15,681,000
Estimated Non-Federal Cost			$ 5,221,000
Cash Contribution		$ 3,130,000	
Other Costs		2,091,000	
Total Separable Element 42			$20,902,000
Seperable Element 43			
Estimated Federal Cost			$12,514,000
Programmed Construction		$ 7,415,000	
Unprogrammed Construction		5,099,000	
Estimated Non-Federal Cost			$ 4,136,000
Programmed Construction		$ 3,055,000	
Cash Contribution	$ 745,000		
Other Costs	2,310,000		
Estimated Non-Federal Cost			
Unprogrammed Construction		$ 1,081,000	
Cash Contribution	$ 1,081,000		

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Other Costs	0	
Total Estimated Programmed Construction Cost		$10,470,000
Total Estimated Unprogrammed Construction Cost		$ 6,180,000
Total Separable Element 43		$16,650,000
First Phase - Fish and Wildlife Mitigation		
Estimated Federal Cost		$ 1,247,000
Estimated Non-Federal Cost		$ 733,000
Cash Contribution	$ 133,000	
Other Costs	600,000	
Total First Phase - Fish and Wildlife Mitigation		$ 1,980,000
Third Phase (P,E&D only)		
Estimated Federal Cost		$ 1,330,000
Estimated Non-Federal Cost		$ 440,000
Cash Contribution	$ 440,000	
Other Costs	0	
Total Third Phase (P,E&D only)		$ 1,770,000

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SUMMARIZED FINANCIAL DATA (Continued)

Project Summary				ACCUM. PCT. OF EST. FED COST
Estimated Federal Cost			$112,200,000	
Programmed Construction		$105,926,000		
Unprogrammed Construction		6,274,000		
Estimated Non-Federal Cost			$ 46,900,000	
Programmed Construction		$ 45,244,000		
Cash Contribution	$22,734,000			
Other Costs	22,510,000			
Estimated Non-Federal Cost Unprogrammed Construction		$ 1,656,000		
Cash Contribution	$ 1,656,000			
Other Costs	0			
Total Estimated Programmed Construction Cost			$151,170,000	
Total Estimated Unprogrammed Construction Cost			$ 7,930,000	
Total Estimated Project Cost			$159,100,000	
Allocations to 30 September 1994			$ 85,872,000	
Conference Allowance for FY 1995			$ 1,500,000	
Allocation for FY 1995			$ 2,400,000 1/	
Allocations through FY 1995			$ 88,272,000	79
Allocation Requested for FY 1996			$ 3,000,000	81
Programmed Balance to Complete After FY 1996			$ 14,654,000	
Unprogrammed Balance to Complete After FY 1996			$ 6,274,000	

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Bank Protection	90	Being Determined
Recreation	50	Indefinite
Entire Project	90	Indefinite

PHYSICAL DATA

Bank Protection: 835,000 lineal feet
First Phase - 430,000 lineal feet
Second Phase - 405,000 lineal feet

1/ Reflects $237,000 reduction assigned as savings and slippage and $1,137,000 reprogrammed to the project.

2/ For programmed work only; remaining work is unprogrammed pending a decision to construct these features and pending completion of a supplemental Design Memorandum. (See OTHER INFORMATION)

Division: South Pacific District: Sacramento Sacramento River Bank Protection Project, California

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JUSTIFICATION: The Sacramento River levee system was initiated as a purely local project and in many cases the levees were constructed close to the river banks without a protective berm. The levee system, which was adopted as the Sacramento River Flood Control Project in 1917, has been modified and expanded several times since that date but no major change in the basic levee alignment has been made since the original conception of the project. Bank protection is necessary to preserve the Sacramento River Flood Control Project and insure that it will continue to furnish the designed degree of protection. The levees are continuously threatened by erosion, and unless corrective measures are taken levee failures may occur with resultant catastrophic damage and possible loss of many lives. Flood events which occurred in February 1986 greatly emphasized these problems. Several levees located along the Sacramento River were subjected to an extensive amount of erosion due to the extremely high river flows. The area protected by the levees comprises over one million acres in which about 50 communities are located; value of lands and improvements (1993) to be protected is about $27.9 billion and about 2,090,000 people live within the flood plain. The levee system enables the use of the flood plain for the benefit of the state and nation. The extremely fertile flood plain lands produce about 8 percent of the total agricultural production of the state and 18 percent of the rice production of the nation. The Sacramento River Bank Protection Project provides a long-range program of bank protection to protect the levees where serious erosion is occurring and to prevent erosion from undermining additional levee sections in the future. In addition to assuring urgently needed flood protection, the project provides recreation facilities consisting of boat-launching facilities, campgrounds, and picnic areas needed along the river to meet a rapidly increasing public demand. Since the initial bank protection contract was let in June 1963, about 754,000 lineal feet of bank protection has been provided. About 81,000 lineal feet of bank protection remains to be placed on the second phase of this project, and the local sponsor supports the addition of a third phase, which will require Congressional authorization.

FISCAL YEAR 1996: The requested amount will be applied as follows:

Separable Element 42 (RM 0-145)	
Initiate Bank Protection Rio Vista To Sacramento RM 15-60	$1,121,000
Initiate Mitigation RM 15-60	15,000
Continue Mitigation RM 60-145	48,000
Planning, Engineering and Design	
Separable Element 40	61,000
Separable Element 41	150,000
Separable Element 42	552,000
Separable Element 43	805,000
Construction Management	248,000
Total	$3,000,000

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NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$ 16,551,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	5,959,000	
Pay 15 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to one-third for work initiated prior to 30 April 1986, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	12,600,000	$ 750,000
Pay 16 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent for work initiated after 30 April 1986, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	11,790,000	258,000
Total Non-Federal Costs	$ 46,900,000	$1,008,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: Chapter 2188, Statutes of the State of California, approved by the Governor on 21 July 1961, established the State Reclamation Board as the agency to meet the requirements of local cooperation for the project. Assurances of local cooperation were accepted from the Board 5 February 1963. As of 30 September 1994, the State has expended $39,307,000 for construction of the project. The Reclamation Board signed a Local Cooperation Agreement (LCA) satisfying the requirements of Section 221, Flood Control Act of 1970 (Public Law 91-611) for the remaining Second Phase work in May 1984. In accordance with provisions of the Water Resources Development Act of 1986 for separable project elements initiated after 30 April 1986, new LCAs were executed for separable element 41 on 15 August 1988 and for separable elements 38B, 40, and 42 on 7 December 1988. The LCA for the First Phase Mitigation was signed on 5 June 1990. Execution of a Project Cooperation Agreement for separable element 43, the last separable element in the Second Phase, is scheduled in January 1998 which is a slippage from the latest completion date of November 1995 presented to Congress. This change is due to the need to complete the Supplemental Design Memorandum including the Supplemental Environmental Impact Statement (SEIS) for the remainder of second phase reevaluating bank protection and design alternatives scheduled for completion in March 1996. The current non-Federal cost estimate of $46,900,000 is an increase of $600,000 from the estimate last presented to Congress of $46,300,000 for the entire project. The cash contribution of $24,390,000, included in the estimate, is an increase of $470,000 from the last estimate of $23,920,000 and is due to revised cost estimates from the local sponsor for lands, easements, rights of way and relocations. The State of California acknowledges the escalating costs and continues to be financially able and willing to participate in the project.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $112,200,000 is an increase of $2,000,000 from the latest estimate ($110,200,000) presented to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ -57,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	2,057,000
Total	$ 2,000,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A final Environmental Impact Statement (EIS) was filed on 15 June 1973. A SEIS for the Second Phase was filed in February 1989. A final EIS for additional work in Butte Basin, and an update submitted as Supplement 4, were signed in June 1988. An Environmental Assessment/Site Specific Report (EA/SSR) was prepared for Contract 42A and a Finding of No Significant Impacts (FONSI) was signed on 15 February 1994. Currently, an EA/SSR to meet both Federal and State of California requirements is approved prior to construction of each bank protection contract. A report is being prepared to reevaluate bank protection design alternatives, including potential use of set-back levees to minimize environmental impacts and the project cost estimate. A SEIS for the report is scheduled for completion in March 1996.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in FY 1962, and for construction in FY 1963. Construction of First Phase was completed in November 1974. Authority to proceed with additional bank protection works, Second Phase, was provided by Section 202, River Basin Monetary Authorization Act of 1974, Public Law 93-251. The Further Continuing Appropriations Act, 1983 extended the limits of the project to include bank protection along the Sacramento River to the upstream ends of the project levees to Chico Landing (Butte Basin area).

The Water Resources Development Act of 1986 modified the First Phase of the project to include acquisition of lands for establishment and maintenance of wildlife habitat at a total cost of $1,410,000 ($1,980,000 inflated through construction). A Design Letter Report for First Phase Mitigation was approved in May 1989 and later modified by Memorandum Addendum of 21 Aug 89. Acquisition and construction was scheduled to be complete in December 1993; however due to active land acquisition plans by State and Federal agencies on the upper Sacramento River, most, if not all, willing seller properties have been identified for other purposes. As a result, the local sponsor is experiencing difficulty finding a willing seller for the last parcel (approximately 90 acres). The local sponsor has made a proposal for the last parcel to U.S. Fish and Wildlife Service which is under consideration. Revegetation of the sites already purchased has been highly successful and is serving as a model for revegetation efforts by others.

The U.S. Fish and Wildlife Service, by letter dated 7 November 1985, issued a Biological Opinion stating that the bank protection work along the Sacramento River from Chico Landing to Red Bluff and in the Butte Basin area would endanger the threatened valley elderberry longhorn beetle. The Service issued a revised opinion on 19 May 1987 which permitted limited rock revetment bank protection to be constructed in the Butte Basin. The potential impact to winter run salmon has also been a significant concern as the winter run salmon have experienced an alarming decline since 1969. National Marine Fisheries Service (NMFS) listed winter run salmon as a threatened species in November 1990. The winter run salmon biological data report was completed January 1991. NMFS Biological Opinion dated 28 October 1991 for the winter run salmon was non-jeopardy but lists recommended conservation measures. Winter run salmon along with bank swallows and Swainson's Hawk are also State listed species and a Biological Opinion was received from California Department of Fish and Game on 18 November 1991 which also recommends conservation measures. By letter dated 16 September 1992, NMFS has requested reinitiation of formal consultation for winter run salmon. Due to these recent biological opinions, a report is being prepared to reevaluate bank protection design alternatives, including potential use of setback levees to minimize environmental impacts and the project cost estimate. Completion of the report is currently scheduled for March 1996.

After the February 1986 flood, the Sacramento River System experienced below normal precipitation and flood flows. This led to a lower rate of erosion and a lowered need for expedited bank protection work. However, recent rainfall was significantly above normal and the urgency for bank protection is likely to increase.

The California Reclamation Board, by letter dated 11 May 1984, requested initiation of a third phase of bank protection. The Board reiterated the critical need for a third phase by letter of 1 September 1988 and stated its willingness and ability to cost-share this phase of the project in accordance with the provisions of the Water Resources Development Act of 1986. Congressional authorization is required to extend the limits of bank protection beyond the current 835,000 lineal feet. Pending completion of the Supplemental Design Memorandum reevaluating bank protection design alternatives, potential proposals for Third Phase bank protection are unscheduled.

Programming of remaining recreation facilities are dependent upon final design and negotiation of cost sharing agreements with the State of California. In addition, programming of remaining bank protection is pending completion of the Supplemental Design Memorandum which will determine the direction of the remainder of second phase.

Supplemental Design Memorandum No. 7 completion date and costs have been affected due to the inclusion of the Resource Agencies in the management of the studies. As a result, the scope of the studies has expanded from the original planned scope.

Several sites along the Lower American River within the confines of the Sacramento River Bank Protection Project require bank protection to avoid undermining levees and flood protection in the Sacramento Metropolitan Area. These sites, totaling approximately 18,000 lineal feet, have been included as part of the remaining work of separable elements 40 and 41. The contracts are being identified as LAR 1 and LAR 2 with associated mitigation. The current cost estimate for this work is $5,289,000, however we expect that the cost could increase to approximately $18,000,000 ($1,000 per lineal foot) upon completion of the final design in Supplemental Design Memorandum No. 8, scheduled for completion in July 1996. Construction for these sites is scheduled for FY 1997 and FY 1998.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Sacramento River Flood Control Project, California (Deficiency Correction) (Continuing)

LOCATION: The project is located on the Sacramento River and the lower reaches of its principal tributaries in north-central California. The project extends from Collinsville near the mouth of the Sacramento River upstream to Ord Bend, a distance of 184 miles.

DESCRIPTION: The project comprises a comprehensive system of levees, overflow weirs, drainage pumping plants and flood bypass channels together with channel clearing, rectification, snagging and bank protection. Some of the facilities were locally constructed, later upgraded, and incorporated into the project, while others were built after project authorization. Maintenance and operation of the facilities after completion is the responsibility of local interests.

AUTHORIZATION: Flood Control Acts of 1917, 1928, and 1941; River and Harbor Act of 1937; Water Resources Development Act of 1986.

REMAINING BENEFIT-REMAINING COST RATIO: The remaining benefit-remaining cost ratio is not applicable because the project is substantially complete, except for remedial work.

TOTAL BENEFIT-COST RATIO: Not Applicable

INITIAL BENEFIT-COST RATIO: No initial benefit-cost ratio was computed for the original project as benefits were estimated to be far greater than costs.

BASIS OF BENEFIT-COST RATIO: Not Applicable

SUMMARIZED FINANCIAL DATA ORIGINAL PROJECT		
Actual Federal Cost		$ 68,925,000
Actual Non-Federal Cost		95,000,000
Cash Contribution	$ 4,950,000	
Other Costs	90,050,000	
Total Original Project Cost		$163,925,000

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Original Project completed prior to 30 September 1981	100	
Remedial Work		
Cache Sl/Yolo Bypass (Unit 109)	100	
Upper Sacramento Area	Not Started	Indefinite
Entire Project	99	Indefinite

SUMMARIZED FINANCIAL DATA (Continued)
REMEDIAL WORK

Cache Slough/Yolo Bypass (Unit 109)		
Estimated Federal Cost		$ 5,110,000
Estimated Non-Federal Cost		628,000
Cash Contribution	$ 0	
Other Costs	628,000	
Total Cache Slough/Yolo Bypass (Unit 109)		$ 5,738,000
Mid-Valley Area 1/		
Lower Sacramento Area (P,E&D Only) 1/		
Upper Sacramento Area (P,E&D Only)		
Estimated Federal Cost		$ 2,340,000
Estimated Non-Federal Cost		0
Total Upper Sacramento Area (P,E&D Only)		$ 2,340,000
-REMEDIAL WORK SUMMARY-		
Estimated Federal Cost		$ 7,450,000
Estimated Non-Federal Cost		$ 628,000
Cash Contribution	$ 0	
Other Costs	628,000	
Total Estimated Remedial Cost		8,078,000
Total Estimated Project Cost		$172,003,000

1/ These elements have been transferred and established as separate projects for new start construction for FY 1996.

2/ Allocations exclude $790,000 for Mid-Valley Area; $5,000 for Lower Sacramento Area; and $1,710,000 for Marysville/Yuba City established as separate projects.

District: South Pacific

District: Sacramento

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Sacramento River Flood Control Project, California (Deficiency Correction)

SUMMARIZED FINANCIAL DATA: (Continued)

		ACCUM. PCT. OF EST. FED COST
Allocations to 30 September 1994	$ 74,975,000 2/	
Conference Allowance for FY 1995	500,000	
Allocation for FY 1995	1,300,000 3/	
Allocations through FY 1995	76,275,000 4/	99
Allocation Requested for FY 1996	$ 100,000	100
Programmed Balance to Complete After FY 1996	$ 0	

3/ Includes $800,000 of the $1,500,000 FY 1995 Congressional Add under the Sacramento River Flood Control Project which will be carried over to FY 1996 for Upper Sacramento Area.

4/ Funding through FY 1995 included in Sacramento River Flood Control Project and reallocated to the Mid-Valley and Lower Sacramento Area Projects.

PHYSICAL DATA
ORIGINAL PROJECT

Levees: Average Height - 15 feet
Length - 980 miles

Bypass or Floodways: 4 Bypasses

Channels: Channel Enlargement - 15 miles along the Sacramento River

Weirs: 5 Overflow Weirs

Cut-offs: 2 River Cut-offs

Pumping Plants: 3 Pumping Plants along east levee of Sutter Bypass

REMEDIAL WORK
Cache Slough/Yolo Bypass (Unit 109)
Levee: Average Height - 25 feet
Length: 1 mile 2/

2/ Remedial work included reconstruction of 1/2 mile of existing levee and construction of a cross levee 1/2 mile in length.

Upper Sacramento Area
Levees: Average Height - 16 feet
Length: approx 12 miles

JUSTIFICATION: The Sacramento River Flood Control Project was initiated by local interests in 1917 and has been modified and expanded several times since that date. This extensive project protects over one million acres in which about 50 communities are located. The assessed value of lands and improvements protected by the project is about $99 billion and approximately 2 million people live within the project area. The levee system enables the use of the flood plain for the benefit of the state and nation. Eight percent of the total agricultural production of the state of

JUSTIFICATION: (Continued)

California and 27 percent of the rice production of the nation are protected by the Sacramento River Flood Control Project.

Cache Slough/Yolo Bypass: The levees near the junction of Cache Slough and the Yolo Bypass were originally constructed on a peat foundation and were subject to subsidence. This was a continuing problem which seriously jeopardized the stability and flood carrying capacity of the project levees in this reach. This portion of the project was turned over to local interests for operation and maintenance in November 1989, when remedial construction was completed. Planting of slope protection on the upper portion of the levee was completed in FY 1993. The area protected comprises about 50,900 acres of highly developed agricultural land and related homes, roads and buildings.

Upper Sacramento Area: An evaluation of about 315 miles of project levees located in Glenn, Colusa, Sutter and Yolo counties indicates that about 12 miles of these levees are structurally deficient and threaten the integrity of the flood control system. The Knights Landing Ridge Cut portion (West Levee) and Colusa Trough of the previously authorized Colusa Trough Drainage Canal element have been included in the Upper Sacramento Area remedial work. The levees have experienced serious subsidence, slippage and partial collapse since the 1950's. Between 1956 and 1986, emergency flood repairs (PL 84-99) have been required four times on the Knight's Landing levees. The need for repair is not attributable to maintenance deficiencies. The communities of Colusa, Princeton, Gerber, Butte City, Meridian, regional transportation systems and other public works will be protected by the improvements.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $100,000 and $800,000, respectively, will be applied as follows:

Planning, Engineering and Design for Upper Sacramento Area	$ 900,000
Total	$ 900,000

NON-FEDERAL COST: Local interests have provided all lands, easements, rights of way and relocations for construction of the original project and are operating and maintaining all completed work. The actual costs for the original project included cash, lands and damages, relocations, and work-in-kind dating back to 1910. The non-Federal cost for Cache Slough/Yolo Bypass remedial work was $628,000 for lands, easements, rights of way and relocations. The last remaining project element, Upper Sacramento Area, will require the non-Federal sponsor to comply with the cost-sharing requirements of the Water Resources Development Act of FY 1986. The non-Federal sponsor must comply with requirements listed below:

NON-FEDERAL COST: (Continued)

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance, Repair, Rehabilitation, and Replacement Costs
Original Project		
Lands and damages, relocations, and work-in-kind	$ 90,050,000	$6,331,000
Cash	4,950,000	
Remedial Work		
Cache Slough/Yolo Bypass (Unit 109)		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	592,000	3,080
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities where necessary for the construction of the project.	36,000	
Total Non-Federal Costs	$ 95,628,000	$6,334,080

The non-Federal Sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: All completed work has been transferred to the State Reclamation Board. Responsibility for maintenance of approximately 980 miles of the levees has been turned over to the State Reclamation Board. The Reclamation Board is also responsible for the operation and maintenance of the Colusa Trough Drainage Canal and west levee of the Knights Landing Ridge Cut and will act as the local sponsor for all remaining remedial construction work. A Project Cooperation Agreement for the elements of the project will be executed prior to initiation of construction.

STATUS OF LOCAL COOPERATION: (Continued)

The local sponsor is cognizant of increased requirements for restoration and design of remaining remedial work and continues to support the project.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $76,375,000 is a decrease of $20,950,000 from the latest estimate ($97,325,000) presented to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ -770,000
Authorized Modifications-transfer of Mid-Valley and Lower Sacramento Area units	-20,180,000
Total	$-20,950,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The original Sacramento River Flood Control Project was substantially complete prior to 1970 and an Environmental Impact Statement (EIS) was not prepared. Prior to initiation of the Cache Slough/Yolo Bypass remedial work an Environmental Assessment (EA) determined that environmental impacts were not significant enough to require an EIS. A Finding of No Significant Impacts (FONSI) was filed on 15 August 1986. Subsequently, an EA/FONSI on the borrow area for Cache Slough/Yolo Bypass was filed in November 1988. The final Programmatic EIS/EIR (Environmental Impact Report) for the Sacramento River Flood Control System Evaluation was filed with EPA on 19 June 1992 and the Record of Decision was signed 4 November 1992. The Programmatic EIS/EIR discusses the environmental impacts resulting from potential work for the entire area in general terms. Prior to initiation of construction for remaining remedial work, site specific environmental documentation will be developed and filed with EPA.

OTHER INFORMATION: Construction was initiated in Fiscal Year 1918. All major project items are completed. A contract to remedy subsidence by repairing the levees at the junction of Cache Slough and the Yolo Bypass was completed in November 1989 and responsibility for maintenance was accepted by the State. A contract for biotechnical slope protection (planting various erosion retarding shrubs, reeds and grasses) awarded in September 1991 for these levees has completed remedial requirements for Cache Slough and the Yolo Bypass.

Colusa Trough/Knights Landing Ridge Cut - In April 1986, an economic and engineering evaluation of the levee subsidence problems at Colusa Trough (Unit 132) and Knights Landing Ridge Cut (Unit 127) was completed. Subject to Section 903(a), remedial construction necessary to restore the project levees was authorized by the Water Resources Development Act of 1986. Colusa Trough and Knights Landing Ridge Cut (West Levee) are not incrementally economically feasible, however, these sites have been transferred to the Upper Sacramento Area for consideration in the Initial Appraisal Report and future design. Knights Landing Ridge Cut (East Levee) has been included with the Mid-Valley Area remedial work. A

OTHER INFORMATION: (Continued)

letter report was completed in February 1993 validating the recommendations.

Following the record high flows of February 1986, Operations and Maintenance funds were provided under Inspection of Completed Works to perform an evaluation of the integrity of the Sacramento River Flood Control System. A five phase program which divided the system into five study areas was developed. In each phase, the structural stability of the levees is examined and a determination made as to whether the system is functioning at its design level. The results of each study phase are submitted as an Initial Appraisal Report.

Phase I - Sacramento Urban Area: Reconstruction of approximately 32 miles of levees is being accomplished as a separate project. Construction was initiated with award of the first construction contract in August 1990. Project completion is scheduled for September 1996 to allow for Congressionally added study and reconstruction of Old Sacramento Flood Wall.

Phase II - Marysville/Yuba City Area: The Initial Appraisal Report was submitted in January 1990. Comments required the preparation of a Budget Decision Document responding to some of the comments and expansion of the design letter report to address the remaining comments. The Budget Decision Document was submitted in May 1991 using FY 1991 engineering and design funds. Design was initiated in March 1991 and completed in May 1993. New start construction funds were received in FY 1993. This element has been established as a separate project for construction.

Phase III - Mid-Valley Area: The Initial Appraisal Report was completed in December 1991 and approved in October 1992 and is being used as the budgetary decision document for a new start construction. Planning, engineering and design was initiated in FY 1993. Completion of design is scheduled for FY 1995.

Phase IV - Lower Sacramento Area: The Initial Appraisal Report was completed in October 1993 and approved in April 1994 and is being used as the budgetary decision document for a new start construction. Planning, engineering and design was initiated in FY 1994. Completion of design is scheduled for FY 1996.

Phase V - Upper Sacramento Area: The Initial Appraisal Report is scheduled for completion in FY 1995. Planning, engineering and design will be initiated in FY 1995.

Appropriations Act language for FY 1993 directed that an entire project economic analysis be completed for the Sacramento River Flood Control Project. The Limited Reevaluation Report dated September 1993 was approved in March 1994. The overall benefit cost ratio for the entire system is 1.8 to 1. This analysis reflects all areas recommended for reconstruction including those currently determined to be incrementally infeasible. During the design stage the economic analysis for each phase will also be reevaluated.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Sacramento Urban Area Levee Reconstruction, California (Continuing Construction)

LOCATION: The project is located within the boundaries of the Sacramento River Flood Control System in the highly urbanized area around the city of Sacramento, near the confluence of the Sacramento and American Rivers. It includes the Natomas area levees from Natomas Cross Canal along Garden Highway to Natomas Main Drain Canal; the south levee of the Sacramento Bypass through Reclamation District 900 and portions of the Yolo Bypass east levee in West Sacramento; and, in South Sacramento, the east bank of the Sacramento River from Miller Park to the town of Freeport. It also includes a concrete flood wall located on the left bank of the Sacramento River in the vicinity of Old Sacramento.

DESCRIPTION: An evaluation of 110 miles of levees in the Sacramento urban area identified approximately 36 miles that are structurally unstable. The project consists of reconstructing those levees as well as the flood wall. In addition to restoring levee stability in and around Sacramento, levee reconstruction will eliminate several weak points in the Sacramento River Flood Control System, improving the system's overall performance and allowing it to function as designed in the project area.

AUTHORIZATION: Flood Control Acts of 1917, 1928 and 1941; River and Harbor Act of 1937; Energy and Water Development Appropriations Act of 1994 (Old Sacramento Flood Wall).

REMAINING BENEFIT - REMAINING COST RATIO: Not applicable because project construction is substantially complete.

TOTAL BENEFIT-COST RATIO: 4.7 to 1 at 8 5/8 percent.

INITIAL BENEFIT-COST RATIO: No initial benefit-cost ratio was reported for the Sacramento River Flood Control Project. The initial benefit-cost ratio reported in the May 1988 Initial Appraisal Report for the Sacramento Urban Area Levee Reconstruction was 4.5 to 1 at 8 5/8 percent (FY 1989).

BASIS OF BENEFIT-COST RATIO: The benefit-to-cost ratio is based on final economic information included in the Local Cooperation Agreement Supporting Document at 1989 price levels.

SUMMARIZED FINANCIAL DATA			ACCUM. PCT. OF EST. FED COST	STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$28,800,000		Entire Project	98	Sep 1996
Estimated Non-Federal Cost		$18,000,000				
Cash Contribution	$ 3,530,000					
Other Costs	$14,470,000					
Total Estimated Project Cost		$46,800,000				
Allocations to 30 September 1994		$23,640,000				
Conference Allowance for FY 1995		1,500,000				
Allocation for FY 1995		1,263,000				
Allocations through FY 1995		24,903,000	86			
Allocation Requested for FY 1996		$ 1,870,000	93			
Programmed Balance to Complete After FY 1996		$ 0				
Unprogrammed Balance to Complete After FY 1996		$ 2,027,000				

PHYSICAL DATA

Levees: Average Height - 15 feet
Length - 36 miles

Reconstruction of 1500 feet of Old Sacramento Flood Wall

JUSTIFICATION: Record high flow conditions during the February 1986 and other storms resulted in Corps participation in 9 major flood fights in the Sacramento area at a cost of $3.0 million. Expenditure of an additional $10.0 million was required for post flood repair work. In Natomas, emergency repair of ten separate slips on the Garden Highway levees prevented potential inundation of thousands of homes, industrial and commercial areas, two major interstate highways, Sacramento Metropolitan Airport and thousands of acres of farmland. Following these events, the stability of the Sacramento River flood control system levees was evaluated. An evaluation report, completed in January 1988 and approved in March 1989, determined that reconstruction of the levees in the Sacramento urban area was necessary. The levees were locally constructed in the early 1900's and incorporated as part of the flood control system in 1917. Nearly 36 miles of project levees, mainly in the Natomas and South Sacramento areas, have serious structural problems due to inadequate original construction materials and techniques. The project levees protect more than 131,000 people and $5.2 billion of property in the Sacramento area. The potential for a catastrophic event is great and the ability to avert the threat from inundation is inadequate. Average annual benefits are all flood control and are estimated to be $14,200,000 at October 1989 price levels.

Division: South Pacific

District: Sacramento

Sacramento Urban Area Levee
Reconstruction, California

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FISCAL YEAR 1996: The requested amount of $1,870,000 will be applied as follows:

Complete Construction on the Old Sacramento Flood Wall	$1,600,000
Planning, Engineering and Design	190,000
Construction Management	80,000
Total	$1,870,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$ 3,050,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	11,420,000	
Pay 5 percent of the costs allocated to flood control and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of flood control facilities.	3,530,000	$ 82,000 1/
Total Non-Federal Costs	$ 18,000,000	

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

1/ Reconstruction will reduce, not increase, annual O&M costs.

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STATUS OF LOCAL COOPERATION: The Project Cooperation Agreement with the California State Reclamation Board was executed on 14 June 1990. In addition to providing necessary lands, easements, rights-of-way, borrow and excavated or dredged material disposal areas and relocations the State has contributed $2,040,000 for construction of the project as of 30 September 1994. The current non-Federal cost estimate of $18,000,000, which includes a cash contribution of $3,530,000 is a decrease of $3,800,000 from the non-Federal cost estimate of $21,800,000 noted in the Project Cooperation Agreement, which included a cash contribution of $2,180,000.

The Project Cooperation Agreement will be amended to include reconstruction of the Old Sacramento Flood Wall prior to initiation of construction. Execution of the amended Project Cooperation Agreement is currently scheduled for June 1995.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $28,800,000 is identical to the latest estimate presented to Congress (FY 1994).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Assessment/Finding of No Significant Impact (EA/FONSI) was released for public review in September 1989. The EA/FONSI was filed with EPA on 21 November 1989.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in FY 1989 (Sacramento River Flood Control Project, California), and funds to initiate construction were appropriated in FY 1990. The scheduled completion date of September 1996 for programmed work is identical to the latest completion date presented to Congress. Unprogrammed work consists of project contingencies associated with design refinement for the Old Sacramento Flood Wall.

The benefit-cost ratio information reported for the project is for the levee reconstruction work only. Based on a Plan of Action for reconstructing the Old Sacramento Flood Wall, approved in May 1994, a separate benefit analysis for this portion of the project will be included in a design memorandum scheduled for completion in February 1995.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Santa Ana River Mainstem, California (Continuing)

LOCATION: The project is located along a 75-mile reach of the Santa Ana River in Orange, Riverside, and San Bernardino Counties southeast of and adjacent to metropolitan Los Angeles, California.

DESCRIPTION: The plan of improvement provides for construction of the Seven Oaks Dam about 35 miles upstream of the existing Prado Dam, with a gross reservoir storage of 145,600 acre feet; flood plain management of the flood overflow area on the Santa Ana River between Seven Oaks Dam and the existing Prado Reservoir; enlargement of Prado Dam to increase the reservoir storage capacity from 217,000 acre-feet to 362,000 acre-feet; construction of 3.3 miles of channel modifications along Oak Street Drain in Corona; enlargement of the existing 2.4 miles of Mill Creek levee; construction of a detention basin and 2.0 miles of channel modifications along the Santiago Creek; and various means of flood control, including flood plain management, levees, and vertical walled concrete channels along the 30.5 miles of the Santa Ana River from Prado Dam to Pacific Ocean. In addition, the plan includes recreational development and purchase of lands for mitigation and preservation of endangered species. A project for San Timoteo Creek was added to the Santa Ana River Mainstem project by Energy and Water Development Appropriation Act of 1988. A special report was approved in May 1994; engineering and design was initiated in Fiscal Year 1991 with funds appropriated for that purpose and was completed in June 1994. Construction was initiated in Fiscal Year 1994. The project was modified by the Water Resources Development Act of 1990 which authorized the Secretary to develop recreational trails and facilities on lands between Seven Oaks Dam and Prado Dam, including flood plain management areas. These features are not included in the current estimate pending development of plans and determination of costs.

AUTHORIZATION: Water Resources Development Act of 1986, Energy and Water Development Appropriation Act, 1988 and Water Resources Development Act of 1990.

REMAINING BENEFIT-REMAINING COST RATIO: 2.4 to 1 at 8-5/8 percent.

TOTAL BENEFIT-COST RATIO: 1.4 to 1 at 8-5/8 percent.

INITIAL BENEFIT-COST RATIO: 1.3 to 1 at 8-5/8 percent (FY 1990).

BASIS OF BENEFIT-COST RATIO: The benefit-cost ratio is based on the Phase II General Design Memorandum dated August 1988 at 1987 price levels.

Division: South Pacific District: Los Angeles Santa Ana River Mainstem, California

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SUMMARIZED FINANCIAL DATA				ACCUMULATED PCT OF EST FED COST
Estimated Federal Cost			$ 778,000,000	
Programmed Construction		$631,422,000		
Unprogrammed Construction		146,578,000		
Estimated Non-Federal			555,000,000	
Programmed Construction		$534,312,000		
Cash Contributions	$ 47,312,000			
Other Costs	487,000,000			
Estimated Non-Federal Unprogrammed Construction		$20,688,000		
Cash Contributions	$ 20,688,000			
Other Costs	0			
Total Estimated Programmed Construction Cost			$1,165,734,000	
Total Estimated Unprogrammed Construction Cost			167,266,000	
Total Estimated Project Cost			$1,333,000,000	
Allocations to 30 September 1994			$325,681,000	
Conference Allowance for FY 1995			66,000,000	
Allocation for FY 1995			69,945,000 1/	
Allocations Through FY 1995			395,626,000 2/	51
Allocation Requested for FY 1996			70,249,000	60
Programmed Balance to Complete After FY 1996			165,547,000	
Unprogrammed Balance to Complete After FY 1996			146,578,000	

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Seven Oaks Dam	37	Being Determined
Prado Dam	0	Unprogrammed
Santiago Creek	0	Being Determined
Mill Creek	100	
Oak Street Drain	100	
Lower Santa Ana River Channel	62	Being Determined
Recreation	0	Being Determined
San Timoteo Creek	5	Unprogrammed
Entire Project	37	Being Determined

1/ Reflects $9,655,000 reduction assigned as savings and slippage and $13,600,000 reprogrammed to the project.

2/ Reflects $2,400,000 in programmed carryover into FY 1996.

Division: South Pacific District: Los Angeles Santa Ana River Mainstem, California

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PHYSICAL DATA

SEVEN OAKS DAM:
Dam: Type - Impervious core
Height - 550 feet
Length - Crest Length 2,980 feet
Outlet Works: Gated conduit, 8,000 cfs maximum discharge
Basin Capacity: 145,600 acre-feet
Spillway: Type - Detached overflow, 500 ft wide, unlined
Embankment: Earth and Rockfill
Lands & Damages: Acres - 2,736 existing streambed and undeveloped (mountainous)

MILL CREEK:
Levee repair: Type - Grouted riprap
Height - 10 feet maximum
Length - 12,500 feet (2.4 miles) of existing
13,600 feet (2.6 miles)

Floodwall (Top of levee): Type - Concrete
Height - 7.5 feet maximum
Length - 12,600 feet (2.4 miles)

OAK STREET DRAIN:
Channel: Rectangular concrete 3.0 mile
Trapezoidal riprap 0.3 mile
Lands & Damages: 34 acres for righta-of-way

SANTIAGO CREEK:
Channel: Rectangular concrete 500 feet
Trapezoidal riprap 2.0 miles
Reservoir: Buttressed
Basin Capacity: Flood control 4,620 acre feet (el. 274 to 298)
Lands and Damages: 281.5 acres, reservoir and channel

PRADO DAM:
Dam: Type - Impervious core
Height - 134 feet
Length - 3,050 crest length
Embankment: Rolled earthfill
Spillway: Type - Detached, overflow concrete, 1,000 feet wide, 578,000 cfs maximum design discharge.
Basin Capacity: 362,000 acre-feet
Lands & Damages: Acres - 1,661 grazing, wildlife

LOWER SANTA ANA RIVER:
Channel: - 200-450 feet wide, 34 bridges replaced or modified
- 5.0 miles trapezoidal concrete
- 2.4 miles rectangular concrete
- 15.5 miles trapezoidal grouted riprap
- 0.8 miles rectangular concrete/soft bottom

Lands & Damages: Acres - 2,429.5 for channel (7.4 miles floodway)
Mitigation Lands: Acres - 92 marsh restoration

RECREATION FACILITIES:
LOWER SANTA ANA RIVER: Bicycle/equestrian trail - 32 miles
SANTIAGO CREEK: Trails - Bicycle and equestrian (1 mile)
Rest stop - Concrete wheel stop
SEVEN OAKS TO PRADO DAM: To be developed

SAN TIMOTEO CREEK:
Channel: 5.4 miles trapezoidal concrete
Basins: 6 in-channel and transition chute
Lands & Damages: 60.3 acres for rights-of-way

Division: South Pacific District: Los Angeles Santa Ana River Mainstem, California

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JUSTIFICATION: Construction of this project will primarily provide protection to lands and improvements within Orange County downstream of Prado Reservoir. A severe flood threat exists in this area, which could cause damages in excess of $15 billion and could endanger and disrupt the lives of over three million people living or working in the floodplain. Damages upstream of Prado Reservoir could exceed $450 million. The overflow area comprises 160 square miles of primarily urban development in 15 cities including San Bernardino, Riverside, Anaheim, Orange, Santa Ana, Fountain Valley, Costa Mesa, Huntington and Newport Beach. The greatest potential damage area is the Orange County floodplain below Prado Dam. The flood of 1938 is the largest that has been recorded since accurate stream gages were placed in the basin. With a peak flow at Riverside Narrows of approximately 100,000 cubic feet per second, the flood covered thousands of acres of then predominantly rural Orange County. Although the area was largely agricultural at the time, the flood caused $4 million in damages ($95 million at 1994 prices). Following this storm, Prado Dam was constructed at the head of the Santa Ana Canyon, providing effective control of floods for much of the downstream basin. In 1969, when communities upstream of Prado Dam suffered $85 million in damages, Prado Dam prevented an estimated $525 million in damages to downstream communities. With current development, damages for a similar flood would be approximately $2.7 billion. Without the project, the level of protection downstream of Prado, primarily in Orange County, is approximately 70 years. With the project, the level of protection downstream of Prado would be increased to 190 years. Average annual benefits, based on October 1987 price levels are as follows:

Annual Benefits	Amount
Flood Damage Prevention	$135,978,000
Recreation	282,000
Total	$136,260,000

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $2,400,000 and $70,249,000, respectively, will be applied as follows:

Initiate channel construction of Reach 7 of Lower Santa Ana River	$11,200,000
Initiate road construction at Seven Oaks	2,800,000
Initiate and complete buildings, grounds and utilities at Seven Oaks	40,000
Continue embankment/spillway construction at Seven Oaks Dam	41,070,000
Continue channel construction on Reach 5 and 6 of Lower Santa Ana River	1,550,000
Complete permanent operating equipment at Seven Oaks	230,000
Planning, Engineering, and Design	8,150,000
Construction Management	7,609,000
Total	$72,649,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsors must comply with the following requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Santa Ana River Mainstem:		
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas.	$ 416,095,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	67,505,000	
Pay 5 percent of total project costs allocated to flood control, and bear all cost of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	58,054,000	$1,373,000
Pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	846,000	6,000

NON-FEDERAL COSTS (Continued)

Requirements of Local Cooperation San Timoteo Creek:	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas.	527,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	2,873,000	
Pay 15 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, and bear all cost of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	9,100,000	972,000
Total Non-Federal Costs	$555,000,000	$2,351,000

The non-Federal sponsors have also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: Orange, San Bernardino, and Riverside Counties are the local sponsors. In accordance with Memorandum of Agreement executed on 6 December 1987, Orange County contributed $3 million to assure the project design schedule was maintained. Orange County will receive credit for those funds towards their share of the project costs during construction. In addition, Orange County worked with California Department of Transportation (CALTRANS) to relocate some key bridges in Fiscal Year 1988, in advance of project construction. On 14 December 1989, the Local Cooperation Agreement was executed in compliance with the requirements of the Water Resources Development Act of 1986. A supplemental Local Cooperation Agreement was executed on 1 July 1994 for San Timoteo Creek. A draft Local Cost-sharing Agreement for recreation on Santiago Creek has been reviewed and approved by the local sponsor, Orange County, and the Orange County Department of Harbors, Beaches and Parks. This draft agreement was forwarded to HQUSACE in December 1991 and returned in June 1992 with comments. Subsequently, this work was rescheduled to Fiscal Year 1999. A Project Cost Sharing Agreement will be executed prior to construction.

STATUS OF LOCAL COOPERATION (Continued)

The current non-Federal cost estimate of $555,000,000, which includes a cash contribution of $68,000,000, is an increase of $104,000,000 over the non-Federal cost estimate of $451,000,000 noted in the Local Cooperation Agreement, which included a cash contribution of $68,000,000. Our analysis of the non-Federal sponsors' financial capability to participate in the project affirms that both San Bernardino and Riverside Counties have a reasonable and implementable plan for meeting their financial commitments. However, due to Orange County filing Chapter 9 bankruptcy in December 1994, further analysis and evaluation of its financial capability is underway. The Orange County Flood Control District believes all issues concerning the escrow account for this project will be resolved by June 1995 or before and commitments for ongoing work will be honored.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $778,000,000 is a decrease of $142,000,000 from the latest estimate ($920,000,000) presented to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ -23,987,000
Post-Contract Award and Other Estimating Adjustments (including contingency adjustments)	-118,013,000
Total	$-142,000,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement was filed with Environmental Protection Agency in June 1989.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1979, and funds to initiate construction were appropriated in FY 1990.

Through negotiations with Fish and Wildlife Service on Section 7 consultations for endangered species (Eriastrum below Seven Oaks and least Bell's vireo at Prado Dam), agreement was reached on the number of acres for mitigation. The final biological opinion necessary for formal conclusion of the consultation was received from Fish and Wildlife Service 22 June 1989.

Coordination with the U.S. Fish and Wildlife Service and the California Department of Fish and Game was initiated early in the planning of alternatives and completed 30 March 1989. The coordination produced a Fish and Wildlife Service Coordination Act Report that was included in the Environmental Impact Statement. Numerous coordination meetings were held, and these agencies had a role in the determination of project associated impacts as well as mitigation needs and opportunities.

OTHER INFORMATION (Continued)

An agreement was signed on 21 September 1989, in accordance with Section 215 of the Flood Control Act of 1968, to permit Orange County to undertake early partial construction of the Santiago Creek improvements in conjunction with other improvements they are planning for water supply, and to be credited for applicable project construction.

Section 104 of the Energy and Water Development Appropriation Act of 1988 authorized."...San Timoteo Creek in the vicinity of Loma Linda for construction as part of the Santa Ana River Mainstem including Santiago Creek Project... the benefits and costs of the San Timoteo project shall be included together with the benefits and costs of the Santa Ana Mainstem including Santiago Creek" at a total cost of $25,000,000. A special report was approved in May 1994; engineering and design was initiated in Fiscal Year 1991 with funds appropriated for that purpose. Engineering and design was completed in June 1994. Construction was initiated in August 1994 with a portion of the $12,000,000 added for that purpose in FY 1994. An additional $5,000,000 was included in Act Language for Fiscal Year 1995 which will be used to award and complete a contract for Reach 2 in August 1995. The balance of construction on the San Timoteo Creek project remains unscheduled.

The project was modified by the Water Resources Development Act of 1990 which authorized the Secretary to develop recreational trails and facilities on lands between Seven Oaks Dam and Prado Dam, including flood plain management areas. These features are not included in the current estimate pending development of plans and determination of costs.

Project completion date last reported to Congress was "unprogrammed" due to remaining construction on San Timoteo Creek being unscheduled.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Santa Paula Creek, California (Resumption)

LOCATION: Santa Paula Creek is a tributary of the Santa Clara River in the vicinity of the city of Santa Paula, Ventura County, and is located approximately 60 miles northwest of Los Angeles.

DESCRIPTION: The project, as originally proposed, consisted of construction of 3.7 miles of concrete channel and a debris basin located in the vicinity of Steckel Park, on Santa Paula Creek, and construction of 0.6 mile of channel and a debris basin on Mud Creek. The current proposed project includes removal of existing Phase I channel and replacement with a trapezoidal channel with a natural bottom and grouted side slopes. The project will require some mitigation. A new project authorization will not be required.

AUTHORIZATION: Flood Control Act of 1948 and Water Resources Development Act of 1992.

REMAINING BENEFIT - REMAINING COST RATIO: 3.3 to 1 at 3-1/4 percent. (See OTHER INFORMATION.)

TOTAL BENEFIT-COST RATIO: 0.20 to 1 at 3-1/4 percent.

INITIAL BENEFIT-COST RATIO: 1.8 to 1 at 3-1/4 percent.

BASIS OF BENEFIT-COST RATIO: The benefits are based on Draft General Reevaluation Report on Santa Paula Creek, California dated 7 July 1994.

SUMMARIZED FINANCIAL DATA			ACCUMULATED PCT OF EST FED COST
Estimated Federal Cost		$17,100,000	
Estimated Non-Federal Cost		4,800,000	
Cash Contributions	$3,165,000		
Other Costs	1,635,000		
Total Estimated Project Cost		$21,900,000	
Allocations to 30 September 1994		$ 7,297,000	
Conference Allowance for FY 1995		500,000	
Allocation for FY 1995		500,000 1/	
Allocations through FY 1995		7,797,000	46

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	12	Being Determined

PHYSICAL DATA

Channels

Trapezoidal Grouted-Stone Channel with Natural Bottom 1.65 miles

Recreation Facilities

1/ Reflects $79,000 reduction assigned as savings and slippage and $79,000 reprogrammed to the project.

Division: South Pacific District: Los Angeles Santa Paula Creek, California

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SUMMARIZED FINANCIAL DATA (Continued)

		ACCUMULATED PCT OF EST FED COST
Allocation Requested for FY 1996	300,000	47
Programmed Balance to Complete after FY 1996	9,003,000	
Unprogrammed Balance to Complete after FY 1996	0	

JUSTIFICATION: Construction of the authorized plan would provide protection to a large portion of the main business and residential districts of the city of Santa Paula and immediate adjacent area from severe flooding along Santa Paula Creek. The January 1990 population of Santa Paula was 24,016, and Ventura County, 668,553. Santa Paula is a trade center for a region which is devoted primarily to citrus fruit and avocado production, but which also contains other industries such as crude oil production and plastics manufacturing. The value of lands and improvements in the overflow area, consisting of 950 acres, is estimated to be $201,800,000 at October 1994 prices and conditions of development. Floods occur as a result of high intensity rainfall of short duration and cause damage to commercial and residential properties, highways, and railroads. Health has been endangered due to flood damages to the water supply and sanitary systems in the city of Santa Paula. The city is located on an alluvial cone which extends from the mouth of the Santa Paula Canyon to the Santa Clara River. Santa Paula Creek carries a heavy debris load, and its average gradient is 390 feet per mile. It is estimated that under present conditions of development, over $1,000,000 in flood damages would be prevented with the project in full operation. Significant intangible benefits would also result from prevention of possible loss of life and interruption of normal community activities and transportation. Average annual benefits at October 1993 price levels are $1,407,000, all flood control.

FISCAL YEAR 1996: The requested amount will be applied as follows:

Planning, Engineering and Design (Complete plans and specifications)	$ 300,000
Total	$ 300,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Flood Control Acts of 1936 and 1965, the non-Federal sponsor was to comply with the requirements listed below.

	Annual	
Requirements of Local Cooperation	Payments During Construction and Reimbursements	Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$1,291,000	$
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	344,000	
Pay 18.5 percent of the costs allocated to flood control to bring the total non-Federal share of flood control cost to 25 percent, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	3,165,000	
Bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.		162,000
Total Non-Federal Costs	$4,800,000	$162,000

STATUS OF LOCAL COOPERATION: A Section 221 Agreement for the authorized project was executed with Ventura County in July 1973, in conformance with Section 221, Flood Control Act of 1970. The State of California officially adopted the project in Chapter 196, Statutes of 1953, and the Water Code 12673. Prior to construction, this agreement will be modified for additional requirements of local cooperation, beyond those in the existing Section 221 Agreement to complete construction and operate and maintain the proposed project in accordance with current standards. (See OTHER INFORMATION.)

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $17,100,000 is a decrease of $30,800,000 from the latest estimate ($47,900,000) presented to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ 3,361,000
Design Changes	24,487,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments	2,952,000
Total	$30,800,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Impact Statement is being prepared concurrently with the General Reevaluation Report and is scheduled for completion in the first quarter of FY 1995.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1970 and allocated in FY 1971. Construction of the project was initiated in 1973 but was stopped when a complaint was filed by environmental organizations and individuals in August 1973 with the U.S. District Court. Approximately 1,800 feet of concrete channel, at the lower end of the project, was completed in January 1974 at an approximate cost of $1.6 million. The Court hearings ended in June 1974. The project was enjoined in June 1976 for failure to comply with National Environmental Policy Act of 1969.

Subsequent studies indicated the authorized plan and all alternatives investigated were not economically feasible. Post-injunction floods seriously damaged the existing 1,800-foot concrete channel. A 1983 proposal to remove the damaged channel and restore it to pre-project conditions was not supported by the local sponsor. The local sponsor still supports construction of a flood control project.

In 1990, a Plan of Action (POA) was prepared for a General Reevaluation Report (GRR) to address the changed conditions in the project area. The GRR was funded in FY 1991 and will serve as a decision document for determining the appropriate course of action the Corps should pursue for finalizing this project. The GRR is scheduled to be completed in June 1995. The GRR currently shows a proposed project which would involve removal of the existing Phase I channel and replacement with a trapezoidal channel with a natural bottom and grouted side slopes. The project will require some mitigation. A new project authorization will not be required.

Debris due to storms in 1991-1992 and 1992-1993 caused damages to existing Phase I channel. First repair contract was completed in May 1993. A second repair contract was completed February 1994.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: West Sacramento, California (Continuing))

LOCATION: The project is located in West Sacramento, Yolo County in north-central California.

DESCRIPTION: The project consists of raising 5.7 miles of levees up to 5.5 feet along the Sacramento and Yolo Bypasses; constructing concrete wing walls, a concrete sill and a manually operated gate at Southern Pacific Railroad; constructing a concrete wing wall and flow cut-off wall on each side of Interstate 80; and developing approximately 40 acres of mitigation lands for riparian and upland habitat loss.

AUTHORIZATION: Water Resources Development Act of 1992.

REMAINING BENEFIT - REMAINING COST RATIO: 8.2 to 1 at 8 percent.

TOTAL BENEFIT-COST RATIO: 6.5 to 1 at 8 percent.

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation contained in the Feasibility Report for Sacramento Metropolitan Area, February 1992, approved March 1992 at October 1991 price levels.

SUMMARIZED FINANCIAL DATA			ACCUM. PCT. OF EST. FED COST
Estimated Federal Cost		$15,200,000	
Estimated Non-Federal Cost		$ 5,000,000	
Cash Contribution	$ 3,050,000		
Other Costs	$ 1,950,000		
Total Estimated Project Cost		$20,200,000	

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSCIAL COMPLETION SCHEDULE
Entire Project	Not Started	Being Determined

PHYSICAL DATA

Sacramento Bypass, South Levee
  Length: 1 mile
  Maximum Height Increase: 3.0 feet
Yolo Bypass, East Levee
  Length: 4.7 miles
  Maximum Height Increase: 5.5 feet
Southern Pacific Railroad Flood Gate
  Double swing gate: Approx 5' x 17'
Interstate 80: Wing walls and cut off walls

Division: South Pacific   District: Sacramento   West Sacramento, California

6 FEB 1995

SUMMARIZED FINANCIAL DATA		ACCUM. PCT. OF EST. FED COST	STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSCIAL COMPLETION SCHEDULE
Allocations to 30 September 1994	$1,595,000				
Conference Allowance for FY 1995	800,000 1/				
Allocation for FY 1995	752,000 2/				
Allocations through FY 1995	2,347,000	15			
Allocation Requested for FY 1996	7,000,000	62			
Balance to Complete After FY 1996	$5,853,000				

1/ PED Conference Allowance $300,000. Construction Conference Allowance $500,000.

2/ Reflects $48,000 reduction assigned as savings and slippage.

JUSTIFICATION: Construction of this project will provide protection to lands, improvements, and over 30,000 people in West Sacramento. Estimated damageable property in the floodplain is $1.2 billion. Flooding in February 1986, in conjunction with subsequent updated hydrologic analyses, have shown that the existing level of flood protection is significantly less than previously thought and does not provide FEMA 100-year level of protection. Levee failure along the Yolo Bypass would release floodwater from the Sacramento River into the West Sacramento urban area, inundating industrial areas, two major highways, thousands of homes and thousands of acres of farmland. Average annual benefits, all flood control, amount to $9.9 million.

FISCAL YEAR 1996: The requested amount will be applied as follows:

Initiate and Complete Real Estate Acquisition	$ 100,000
Initiate Construction of Levees	4,700,000
Initiate Mitigation Contract	1,600,000
Initiate Cultural Resources Contract	100,000
Planning, Engineering and Design (Contract Preparations)	100,000
Construction Management	400,000
Total	$7,000,000

Division: South Pacific

District: Sacramento

West Sacramento, California

6 FEB 1995

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$ 1,930,000	$
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	20,000	
Pay 15.2 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of flood control facilities.	3,050,000	
Total Non-Federal Costs	$ 5,000,000	$ 20,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION:

The California State Reclamation Board will act as the non-Federal sponsor for the project. The Project Cooperation Agreement (PCA) is scheduled to be executed in September 1995.

Division: South Pacific District: Sacramento West Sacramento, California

6 FEB 1995

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $15,200,000 is a decrease of $1,500,000 from that authorized in the Water Resources Development Act of 1992. This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ -1,500,000
Total	$ -1,500,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement was filed with EPA in February 1992.

OTHER INFORMATION: Funds were appropriated in FY 1992 to initiate preconstruction engineering and design for the combined American River Watershed and Sacramento Metropolitan studies. The two projects were separated when WRDA 92 authorized West Sacramento (Sacramento Metropolitan) independently of the American River Watershed Project.

The fish and wildlife mitigation cost is estimated to be about $ 3.1 million.

Division: South Pacific District: Sacramento West Sacramento, California

6 FEB 1995

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Wildcat and San Pablo Creeks, California (Continuing)

LOCATION: The project is located on the east side of San Francisco Bay in the vicinity of San Pablo and Richmond, Contra Costa County, California, about 20 miles northeast of San Francisco, California.

DESCRIPTION: The project consists of two reaches. Reach 1 includes 9,900 lineal feet of channel and levee work on Wildcat Creek and 10,000 lineal feet of channel and levee work on San Pablo Creek. Improvements include open, concrete, earthen and rock trapezoidal channels and earthen levees, culverts and a sediment basin (Wildcat Creek). About 20 acres will be planted for riparian mitigation of fish and wildlife impacts. Recreation features include paved trails, parking, a pedestrian bridge and a restroom. Reach 2, consisting of 9,400 lineal feet of channel and levee work on Wildcat Creek, 1,800 lineal feet of channel and levee work on San Pablo Creek, and mitigation for fish and wildlife on 8 acres, has been determined to be not economically feasible and has been reclassified to the Inactive category. Reach 1 will function independently. Accordingly, Reach 2 is not reflected in the current project costs, benefits, or schedule.

AUTHORIZATION: Section 201 of the 1965 Flood Control Act (Authorized 1976) (See OTHER INFORMATION)

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable because project construction is substantially complete.

TOTAL BENEFIT-COST RATIO: 1.2 to 1 at 6-7/8. (Reach 1 only)

INITIAL BENEFIT-COST RATIO: 1.2 to 1 at 6-7/8 percent (FY 1980) (Total Project)

BASIS OF BENEFIT-COST RATIO: Benefits are from the draft Post Authorization Change Report dated September 1990 at October 1989 price levels.

SUMMARIZED FINANCIAL DATA		
Estimated Federal Cost		$17,700,000
Estimated Non-Federal Cost		15,100,000
Cash Contribution	$ 1,490,000	
Other Costs	13,610,000	
Total Estimated Project Cost		32,800,000

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Levees and channels	90	Mar 1996
Recreation	75	Sep 1996
Entire Project	80	Sep 1996

Division: South Pacific District: Sacramento Wildcat and San Pablo Creeks, California

6 FEB 1995

SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 1994	$14,303,000	
Conference Allowance for FY 1995	2,157,000	
Allocation for FY 1995	2,157,000 1/	
Allocations through FY 1995	16,460,000	93
Allocation Requested for FY 1996	1,240,000	100
Programmed Balance to Complete After FY 1996	0	
Unprogrammed Balance to Complete After FY 1996	0	

1/ Reflects $341,000 reduction assigned as savings and slippage and $341,000 reprogrammed to the project.

PHYSICAL DATA

Flood Control

Wildcat Creek Channel Improvements

Reach 1		
Channel Excavation & Levee Improvements	8,900	L.F.
Rectangular Concrete Channel	400	L.F.
Sediment Basin	600	L.F.
Total Improvements	9,900	L.F.

San Pablo Creek Channel Improvements

Reach 1		
Channel Excavation & Levee Improvements	8,900	L.F.
Rectangular Concrete Channel	1,100	L.F.
Total Improvements	10,000	L.F.
Design Capacities:		
Wildcat Creek	2,300	c.f.s.
San Pablo Creek	5,100	c.f.s.

Recreation (Reach 1)

Paved Trail	8,100	Feet
Parking/Staging Area	1	Each
Pedestrian Bridge	1	Each
Restrooms	1	Each

JUSTIFICATION: Wildcat and San Pablo Creeks flow through the cities of San Pablo and Richmond and the unincorporated area of North Richmond. Development of the basins consists of densely populated residential, commercial and industrial areas, mostly in the lower reaches. The 1993 population of the cities of Richmond and San Pablo was approximately 92,000 and 26,000, respectively. Present value of improvements in the area to be protected is $82 million. Flooding within the urban area and lower reaches on Wildcat and San Pablo Creeks occurs almost every year as a result of sinuous alignment, insufficient channel capacities, debris jams, and inadequate culverts and bridges. Severe floods have occurred eight times in the last 33 years, approximately once every four years. The flood of record, estimated to be a 30 year event, occurred in January 1982 and caused damages of about $2.7 million. If this were to occur under 1993 prices the amount would be $3.9 million. The project will provide a high degree of flood protection, protect human life, reduce flood damage to residential and commercial and industrial property and permit development of recreational areas. Average annual benefits for Reach 1 only, based on October 1989 price levels, are estimated at:

Annual Benefits	Amount
Flood Control	$2,055,000
Recreation	490,000
Total	$2,545,000

FISCAL YEAR 1996: The requested amount will be used as follows:

Complete Recreation Facilities Construction	1,169,000
Complete Channel Improvement on Wildcat Creek	61,000
Construction Management	10,000
Total	$1,240,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986 the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$ 7,788,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary in the construction of the project	4,322,000	
Pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, and replacement of recreation facilities.	1,500,000	$ 37,000
Pay 5 percent of the costs allocated to flood control and bear all costs of operation, maintenance, and replacement of flood control facilities.	1,490,000	111,000
Total Non-Federal Costs	$15,100,000	$148,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

Division: South Pacific   District: Sacramento   Wildcat and San Pablo Creeks, California

6 FEB 1995

STATUS OF LOCAL COOPERATION: A flood control Local Cooperation Agreement (LCA) satisfying all requirements of Section 221, Flood Control Act of 1970 (Public Law 91-611) and consistent with the Water Resources Development Act of 1986 (Public Law 99-662), was executed on 20 June 1986 between the Department of the Army and the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD). The LCA for development of trail and recreational improvements for the project was executed on 15 April 1992 between the Department of the Army and East Bay Regional Park District. The current non-Federal flood control cost estimate of $13,600,000 which includes a cash contribution of $1,490,000, is an increase of $2,350,000 from the non-Federal cost estimate of $11,250,000 noted in the LCA, which included a cash contribution of $1,437,500. The non-Federal flood control sponsor acknowledges the escalated costs. Although the local sponsor suffered a financial setback when scheduled FY 90-91 state subventions program funding was discontinued by the State of California as a state budget reduction action, adjustments were made in the schedule of contract awards for the project while the sponsor secured other sources of cost-sharing funds. The current non-Federal recreation cost estimate of $1,500,000 is an increase of $100,000 from that last presented to Congress. The sponsor has indicated it is financially capable and willing to contribute the non-Federal share.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $17,700,000 is an increase of $1,600,000 from the latest estimate ($16,100,000) submitted to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ -34,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	974,000
Design Changes	660,000
Total	$1,600,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement was filed on 7 June 1976. A revised Final Environmental Impact Statement was filed on 28 March 1986. An Environmental Assessment (EA) specifically for recreation was distributed for public review in October 1990. A Finding of No Significant Impacts (FONSI) for the recreation features was signed on 12 February 1991.

OTHER INFORMATION: Funds were appropriated in Fiscal Year 1977 to initiate preconstruction planning and in Fiscal Year 1980 for construction.

Hazardous, toxic, and radiological wastes (HTRW) field and lab investigations and analysis for Wildcat Creek (Contract 3) have been completed. The contract will be advertised in January 1995. The final construction contract for channel improvements on San Pablo Creek was awarded on 29 March 1994 and is scheduled for completion in April 1995. Phase 2 Recreation has been delayed until Fiscal Year 1996 to allow for the completion of Contract 3.

Change in cost and schedule due to Contract 3A award amount and subsequent modifications being more than originally estimated, resolution of HTRW issues, and addition of fish ladder to Contract 3 design.

More detailed design study and floodplain analysis of the upstream portion of San Pablo and Wildcat Creeks determined that the previous plan was not adequate to provide 100 year protection to the Reach 2 areas, and that the high cost of a revised plan was not economically feasible. The local sponsor, CCCFCWCD agreed with the decision to reclassify Reach 2 to the Inactive category. Should conditions change in the future, a restudy of Reach 2 could be undertaken. The Decision Paper, March 1990, documented the results.

6 FEB 1995

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Tropicana and Flamingo Washes, Nevada (Continuing)

LOCATION: The project area is located west of and through the urbanized Las Vegas area along both Tropicana and Flamingo Washes in southern Nevada. The washes emanate from the surrounding mountains and flow eastward through the developed rural and urban downtown areas to the confluence with Las Vegas Wash.

DESCRIPTION: The recommended plan will provide urban flood reduction, erosion control and wildlife enhancement for portions of Las Vegas and the surrounding areas to the west and southwest, including the rapidly developing alluvial fan immediately west of Las Vegas. The plan recommends construction of four debris basins, two detention basins, modifications to two existing detention basins, 28 miles of channels connecting these project elements, environmental mitigation, and recreation facilities. This system of basins will accept the flows from the primary channels, collect and detain them, and then release them at non-damaging rates of flow from Tropicana Detention Basin. A system of four debris basins will trap large bedloads and prevent erosion damage to the project. Environmental mitigation features include compensation for disturbance to the threatened desert tortoise and other impacted significant terrestrial resources. Recreation facilities will include hiking, bicycle and equestrian trails, and picnic areas around the detention basins.

AUTHORIZATION: Section 101(13) of the Water Resources Development Act of 1992.

REMAINING BENEFIT - REMAINING COST RATIO: 1.5 to 1 at 8-1/2 percent.

TOTAL BENEFIT-COST RATIO: 1.5 to 1 at 8-1/2 percent.

INITIAL BENEFIT-COST RATIO: 1.2 to 1 at 8-1/2 percent (FY 1994).

BASIS OF BENEFIT-COST RATIO: The benefit-cost ratio is based on the Chief of Engineers' Report dated January 1992, at 1991 price levels.

SUMMARIZED FINANCIAL DATA			ACCUMULATED PCT OF EST FED COST	STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$ 169,900,000		Entire Project	Not Started	Being Determined
Estimated Non-Federal Cost		61,100,000 1/				
Cash Contributions	$ 45,100,000					
Other Costs	16,000,000					
Total Estimated Project Cost		$ 231,000,000				

1/ Excludes the cost of the lateral collector system. (See NON-FEDERAL COST)

Division: South Pacific District: Los Angeles Tropicana and Flamingo Washes, Nevada

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SUMMARIZED FINANCIAL DATA (Continued)

			ACCUMULATED PCT OF EST FED COST
Allocations to 30 September 1994	$ 9,759,000		
Conference Allowance for FY 1995	7,000,000		
Allocation for FY 1995	5,892,000	1/	
Allocations through FY 1995	15,651,000	2/	9
Allocation Requested for FY 1996	4,000,000		12
Programmed Balance to Complete after FY 1996	150,249,000		
Unprogrammed Balance to Complete after FY 1996	0		

1/ Reflects $1,108,000 reduction for savings and slippage.

2/ Reflects $4,200,000 in programmed carryover into FY 1996.

PHYSICAL DATA

PRIMARY CHANNELS (Trapezoidal concrete)

RED ROCK CHANNEL:
Length: 6 miles
Base Width: 5-15 feet
Depth: 6-9 feet

FLAMINGO DIVERSION CHANNEL:
Length: 3.7 miles
Base Width: 5-20 feet
Depth: 7-11.5 feet

TROPICANA CHANNEL:
Length: 6.5 miles
Base Width: 3-5 feet
Depth: 5-9.5 feet

R-1, F-1, F-2 and F-4 CHANNELS:
Length: 10.1 miles (total)
R-4: 3 miles F-2: 1.7 miles
F-1: 3.7 miles F-4: 1.7 miles
Base Width: 5 feet

PHYSICAL DATA (Continued)

DETENTION BASINS

RED ROCK DETENTION BASIN MODIFICATION:
Type: Compacted earthfill embankment
Maximum Height: 60 feet
Length: 4,000 feet
Spillway Length: 940 feet (600 existing, 340 auxiliary)
Basin Capacity: 2,162 acre-feet

FLAMINGO DETENTION BASIN MODIFICATION:
Type: Compacted earthfill embankment
Maximum Height: 38 feet
Length: 4,800 feet
Spillway Length: 180-foot-wide labyrinth
Spillway Elevation: 2470.5 feet NGVD
Basin Capacity: 1,706 acre-feet

BLUE DIAMOND DETENTION BASIN:
Type: Roller compacted concrete
Maximum Height: 49 feet
Outlet Discharge: 180 cfs
Length: 6,524 feet
Crest Elevation: 2869 feet NGVD
Basin Capacity: 2,224 acre-feet

ENVIRONMENTAL MITIGATION
Habitat of threatened desert tortoise
Permanent disturbance: 730 acres
Temporary disturbance: 215 acres

DEBRIS BASINS

R-4 DEBRIS BASIN
Type: Basin/earthfill embankment combination, with dumpstone-revetted embankment
Maximum Height: 35 feet
Length: 2,000 feet
Basin Capacity: 94 acre-feet

F-1 DEBRIS BASIN
Type: Basin/earthfill embankment combination, with dumpstone-revetted embankment
Maximum Height: 30 feet
Length: 700 feet
Basin Capacity: 75 acre-feet

F-2 DEBRIS BASIN
Type: Excavated pit with grouted sideslopes
Average Depth: 35 feet
Average Sideslopes: 2 horizontal on 1 vertical
Basin Capacity: 17 acre-feet

F-4 DEBRIS BASIN
Type: Excavated pit with grouted-stone sideslopes
Average Depth: 25 feet
Average Sideslopes: 2 horizontal on 1 vertical
Basin Capacity: 20 acre-feet

RECREATION FACILITIES
Picnic areas around detention basins
Trails: Hiking, bicycle and equestrian

JUSTIFICATION: Construction of the authorized plan would provide 100-year level of flood protection to the developing alluvial fan area and to portions of the existing developed urban community. The population of the Las Vegas Valley has increased from 94,000 in 1959 to 835,000 in 1991 and is expected to exceed 1 million by the year 2000, greatly increasing the potential for and severity of urban flood damages along Tropicana and Flamingo Washes. The present value of structures and contents in the overflow area is about $2.1 billion. Most major flooding events result from heavy local summer thunderstorms. The July 1975 flood caused $5 million in damages, $11.9 million at current prices, throughout the greater Las Vegas communities. The severity of the July and August 1984 flooding and associated damages, estimated at $7.9 million, resulted in a Presidential disaster declaration for Clark County, including the Las Vegas Valley, in September 1984. Clark County also passed an emergency $15 million bond issue to deal with the flooding problem. In June 1985, the Clark County Regional Flood Control District was created by the Nevada State Legislature to provide an effective organization to address the flood problems in Clark County. The flood control district completed a Flood Control Master Plan in May 1986 which identifies a recommended plan for the Las Vegas Valley. The floods of June-July 1990 caused three fatalities and approximately $7.6 million in damages. Practically all of these damages would have been prevented had the project been in full operation. Average annual benefits, at October 1991 price levels, are $27,800,000, all flood control.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $4,000,000 and $4,200,000, respectively, will be applied as follows:

Initiate construction of Tropicana Dam modification	$ 4,000,000
Complete construction of Red Rock Dam modification	1,901,000
Planning, Engineering, and Design for Flamingo Channel	560,000
Planning, Engineering, and Design for Flamingo Diversion Channel	1,000,000
Engineering and Design	139,000
Construction Management	600,000
Total	$ 8,200,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

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Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Requirements Costs
Project Costs		
Provide lands, easements, rights-of-way, borrow and excavated and dredged material disposal areas (including mitigation).	$ 16,000,000	$
Pay 17.7 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, as reduced for credit allowed based on prior work (Section 104 of the Water Resources Development Act of 1986 and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	38,350,000	500,000
Pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	6,750,000	
Total Non-Federal Project Costs	61,100,000	500,000
Associated Non-Federal Costs		
The lateral collector system will be designed and constructed by the local sponsor to meet Corps performance criteria. All costs for the lateral collector system, including design, construction, lands and other legal and administrative costs will be borne by the local sponsor, and will not be eligible for credit or reimbursement.	16,000,000	100,000
Total Non-Federal Costs	$ 77,100,000	$ 600,000

Division: South Pacific District: Los Angeles Tropicana and Flamingo Washes, Nevada

6 FEB 1995

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The Clark County Regional Flood Control District and the Department of Public Works are the local sponsors for flood control. The Clark County Recreation Department is the potential local sponsor for the recreation feature. In January 1992, during an Executive Committee Meeting, the local sponsor reaffirmed its support and willingness to financially participate in the construction of the project at a level consistent with the current cost-sharing policy for construction. The current non-Federal cost estimate of $61,100,000 includes a cash contribution of $45,100,000 which is to be partially offset by a credit of $9.9 million allowed for locally-constructed flood control work determined to be in accordance with Section 104 of the Water Resources Development Act of 1986 and $16,000,000 for the cost of the associated locally-constructed lateral collector system. Project Cooperation Agreement (PCA) is scheduled to be executed in February 1995.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $169,900,000 is a decrease of $30,600,000 from the latest estimate ($200,500,000) presented to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	$ -14,485,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	-14,847,000
Schedule Changes	- 1,268,000
Total	$ -30,600,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final environmental impact statement (EIS) was filed with the Environmental Protection Agency (EPA) on October 1991.

OTHER INFORMATION: Funds were appropriated to initiate preconstruction engineering and design in FY 1992 and to initiate construction in FY 1994.

The real estate estimate was reduced $19,706,000 after determination that Bureau of Land Management lands in the Flamingo Dam Basin could be acquired at no cost to the local sponsor.

APPROPRIATION TITLE: Construction, General - Improvement of the Environment

PROJECT: Yolo Basin Wetlands, Sacramento River, CA (Continuing)

LOCATION: The Yolo Basin Wetlands area is located within the boundaries of the Yolo Bypass which is an operative feature of the Sacramento River Flood Control Project. The Yolo Bypass extends 43 miles from Fremont Weir on the Sacramento River, south to the town of Rio Vista where it rejoins the river.

DESCRIPTION: The Yolo Basin Wetlands project will include restoration of wetlands, and contribute to a larger program which is now in the planning stage proposed by an interagency group of state and local governments and organizations. Work at the wetlands sites will include physical improvements to help create a mixture of native marsh, permanent and seasonal wetlands, and riparian forest through modification of existing drainage canals or construction of small berms and channels to redirect available water sources to proposed wetland areas. Additional project features include Administrative and Maintenance Facilities and a Flood Plain Management Planning Model.

AUTHORIZATION: Water Resources Development Act of 1986, Water Resources Development Act of 1992, and Energy and Water Development Appropriations Act of 1993.

REMAINING BENEFIT-REMAINING COST RATIO: N/A

TOTAL BENEFIT-COST RATIO: N/A

INITIAL BENEFIT-COST RATIO: Benefits are non-monetary and a benefit-cost ratio was not developed.

BASIS OF BENEFIT-COST RATIO: N/A

SUMMARIZED FINANCIAL DATA			ACCUM. PCT. OF EST. FED COST
Estimated Federal Cost		$ 7,170,000	
Estimated Non-Federal Cost		4,830,000	
Cash Contribution	0		
Other Costs	$4,830,000		
Total Estimated Project Cost		$12,000,000	
Allocations to 30 September 1994		$ 2,554,000	
Conference Allowance for FY 1995		$ 2,000,000	
Allocation for FY 1995		$ 3,896,000 1/	
Allocations through FY 1995		$ 6,450,000	90
Allocation Requested for FY 1996		$ 720,000	100
Programmed Balance to Complete After FY 1996		$ 0	

1/ Reflects $317,000 reduction assigned as savings and slippage and $2,213,000 reprogrammed to the project.

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	27%	Nov 1995

PHYSICAL DATA

Wetlands Area:	Two sites totaling 3,282 acres.
182 acres	in the Yolo Bypass between Interstate 80 and Southern Pacific Railroad causeways.
3,100 acres	spanning the Yolo Bypass South of Interstate 80 at former Mace Ranch site in the Putah Creek Sinks vicinity.

Administrative and Maintenance Facilities:
Located on approximately 13 acres, the facilities include a caretaker residence, office building, storage building, small equipment shed, herbicide storage shed, parking area, visitor kiosk, and above-ground storage tanks for diesel and gasoline.

Division: South Pacific

District: Sacramento

Yolo Basin Wetlands,
Sacramento River, California

6 FEB 1995

JUSTIFICATION: Fish and wildlife restoration within the Sacramento Valley is of significant concern to the State of California and local communities as well as the Federal Government. Restoration of wetland habitat will attract additional waterfowl, wading birds, and shorebirds. In addition, it will be an important contribution to the recovery of many Federal and State rare, threatened, or endangered species such as Swainson's hawk, sandhill crane, long-billed curlew, and white-faced ibis. The importance of the Yolo Bypass wetland to waterfowl and other water birds has increased due to the disappearance over recent decades of vital wetlands in the Central Valley. Waterfowl biologists consider Yolo Bypass a vital link along the Pacific Flyway. The environmental improvement will be a significant contribution to both state and international goals of restoring critical wetland habitat and continental waterfowl populations as proposed by California state legislation and the U.S. and Canadian North American Waterfowl Management Plan. Benefits are non-monetary.

FISCAL YEAR 1996: The requested amount will be applied as follows:

Complete Construction of Water Management Structures at Putah Creek Sinks Site	$415,000
Complete Construction of Water Management Structures at Yolo Causeway Site	20,000
Complete Construction of Administrative and Maintenance Facilities	190,000
Planning, Engineering and Design	40,000
Construction Management	55,000
Total	$720,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, and as modified by the Water Resources Development Act of 1992, Public Law 102-580, Section 344 (a)(1), the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas and bear all costs of operation, maintenance, repair, rehabilitation and replacement of project modifications for improvement of the environment.	$4,830,000	$415,100

STATUS OF LOCAL COOPERATION: The California State Department of Fish and Game is the non-Federal project sponsor, and at their request, separate Local Cooperation Agreements have been prepared for the Putah Creek Sinks and Yolo Causeway sites. The Local Cooperation Agreement for the Putah Creek Sinks site was executed on 23 December 1993. The Local Cooperation Agreement for the Yolo Causeway site was executed 30 November 1994 by Department of Fish and Game and is scheduled for execution in March 1995 which is a slippage from the latest completion date of April 1994 presented to Congress. This change is due to the need to prepare a Supplemental Project Modification Report (PMR) for revising the acreage for habitat restoration from 480 to 182. Purchase of approximately 3100 acres at the Putah Creek Sinks site, 182 acres at the Yolo Causeway site and approximately 13 acres for the Administrative and Maintenance Area has been completed.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $7,170,000 is an increase of $370,000 from the latest estimate ($6,800,000) presented to Congress (FY 1995). This change includes the following items.

ITEM	AMOUNT
Price Escalation on Construction Features	$ -150,000
Authorized Modifications	20,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	500,000
Total	$ 370,000

Division: South Pacific

District: Sacramento

Yolo Basin Wetlands,
Sacramento River, California

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STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Assessment and Finding of No Significant Impacts was signed on 1 May 1992 for the Putah Creek Sinks site and 20 September 1994 for the Yolo Causeway site. Environmental Assessments for the Administrative and Maintenance Area and the 180 acre addition are scheduled for completion in March 1995 and July 1995, respectively.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1991.

As directed by the Energy and Water Development Appropriations Act of 1993, a flood plain management model has been included in the project cost estimate at a cost of $660,000, all Federal. The two-dimensional hydrodynamic model will be used to identify and evaluate potential flood control impacts associated with land use modifications for future wetlands projects in the Yolo Bypass.

Benefits are non-monetary in essence, with the primary beneficiaries of the proposed restoration work being fish and wildlife especially waterfowl and other water birds. Incidental secondary benefits such as sediment stabilization and improved water quality will provide additional on-and off-site fish and wildlife benefits. Incidental recreational opportunities will also be created.

As directed by Section 344 (a) (3) of the Water Resources Development Act of 1992, Public Law 102-580, a separate project modification report is being prepared for an alternative Davis site. The final report dated June 1994 is scheduled for approval in April 1995. The alternative site is located contiguous to the Yolo Bypass, immediately east of the Davis Water Pollution Control Plant, and along the north side of the Willow Slough Bypass. Previously included as part of the Yolo Basin Wetlands project, the Davis site has been separated from the project, and is proceeding as a Continuing Authorities project in accordance with Section 1135 (b) of the Water Resources Development Act of 1986.

A Supplemental PMR was prepared for the Yolo Causeway site to support a revised LCA reflecting the reduction of the project acreage from 480 acres to approximately 180 acres which was submitted October 1994. Approval of the original PMR included approval to negotiate and have the local sponsor execute a Local Cooperation Agreement. The Local Cooperation Agreement for the Yolo Causeway site was executed by Department of Fish and Game on 30 November 1994. Execution of the Local Cooperation Agreement by the Corps is scheduled for March 1995.

A letter Supplement PMR and Environmental Assessment are being prepared for the 180 acre addition which will solve access problems for the Putah Creek Sinks site and provide additional wildlife benefits.

Construction estimates for the Northern sector of Putah Creek Sinks sites are exceeding the original PMR estimate. In an effort to reduce costs, negotiations are taking place with U.S. Fish and Wildlife Service and Ducks Unlimited to design and construct Putah Creek Sinks site. The work would be brokered through U.S Fish and Wildlife Service for design to be accomplished by Ducks Unlimited. Additional funds will be provided for construction. If approval of the Causeway site is received, there is potential to include it with the Putah contract.

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SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. NAVIGATION

a. Channels and Harbors.

The budget estimate of $36,567,000 provides for essential operation and maintenance on 23 channel and harbor projects named in the list which follows. The work to be accomplished under this activity consists of operating and maintaining the coastal navigation channels, harbors and anchorages by means of dredging, constructing bulkheads and spoil disposal areas, snagging, and repairing channel stabilization works, navigation structures; and harbor jetties, all as authorized in the laws pertaining to river and harbor projects.

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
CALIFORNIA			
Channel Islands Harbor	1,821,000 (0) (1,821,000)	890,000 (0) (890,000)	1. None. 2. Dredging.
Humboldt Harbor and Bay	2,885,000 (34,000) (2,851,000)	4,670,000 (0) (4,670,000)	1. Jetty inspection in FY 95. 2. Dredging.
Los Angeles - Long Beach Harbor Model	157,000 (0) (157,000)	160,000 (0) (160,000)	1. None. 2. None.
Morro Bay Harbor	764,000 (0) (764,000)	2,580,000 (0) (2,580,000)	1. None. 2. Dredging.

6 FEB 1995

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. NAVIGATION (Cont'd)

a. Channels and Harbors (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
CALIFORNIA (Cont'd)			
Moss Landing Harbor	0	845,000	
	(0)	(0)	1. None.
	(0)	(845,000)	2. Dredging.
Oakland Harbor	2,478,000	2,205,000	
	(396,000)	(345,000)	1. Periodic railroad bridge inspection in FY 95.
	(2,082,000)	(1,860,000)	2. Dredging.
Oceanside Harbor	790,000	1,045,000	
	(0)	(0)	1. None.
	(790,000)	(1,045,000)	2. Dredging.
Petaluma River	2,019,000	1,690,000	
	(0)	(0)	1. None.
	(2,019,000)	(1,690,000)	2. Dredging.

6 FEB 1995

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. NAVIGATION (Cont'd)

a. Channels and Harbors (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
CALIFORNIA (Cont'd)			
Port Hueneme	200,000	135,000	
	(200,000)	(0)	1. Hydrographic sediment survey and structural survey of jetties in FY 95.
	(0)	(135,000)	2. None.
Redwood City Harbor	0	2,600,000	
	(0)	(0)	1. None.
	(0)	(2,600,000)	2. Dredging.
Richmond Harbor	2,140,000	6,481,000	
	(0)	(0)	1. None.
	(2,140,000)	(6,481,000)	2. Dredging.
Sacramento River	1,889,000	457,000	
(30 ft Project)	(94,000)	(97,000)	1. None.
	(1,795,000)	(360,000)	2. None.
Sacramento River Shallow	235,000	117,000	
Draft Channel	(105,000)	(87,000)	1. Periodic inspection of lock in FY 95.
	(130,000)	(30,000)	2. None.

6 FEB 1995

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. NAVIGATION (Cont'd)

a. Channels and Harbors (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
CALIFORNIA (Cont'd)			
Sacramento River and Tributaries (Debris Control)	835,000	872,000	
	(0)	(0)	1. None.
	(835,000)	(872,000)	2. None.
San Diego Harbor	123,000	1,085,000	
	(123,000)	(0)	1. Hydrographic sediment survey in FY 95.
	(0)	(1,085,000)	2. Dredging.
San Francisco Bay - Delta Model Structure	2,309,000	2,000,000	
	(980,000)	(1,010,000)	1. None.
	(1,329,000)	(990,000)	2. Maintain hydraulic model.
San Francisco Bay Long Term Management Strategy	504,000	150,000	
	(504,000)	(150,000)	1. Prepare environmental assesment in FY 95.
	(0)	(0)	2. None.
San Francisco Harbor	1,784,000	1,825,000	
	(0)	(0)	1. None.
	(1,784,000)	(1,825,000)	2. Dredging.

6 FEB 1995

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. NAVIGATION (Cont'd)

a. Channels and Harbors (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
CALIFORNIA (Cont'd)			
San Joaquin River	1,685,000 (82,000) (1,603,000)	1,659,000 (84,000) (1,575,000)	1. None. 2. Dredging.
San Pablo Bay and Mare Island Strait	2,308,000 (0) (2,308,000)	1,080,000 (0) (1,080,000)	1. None. 2. Dredging.
Santa Barbara Harbor	1,934,000 (0) (1,934,000)	1,038,000 (0) (1,038,000)	1. None. 2. Dredging.
Suisun Bay Channel	782,000 (0) (782,000)	665,000 (0) (665,000)	1. None. 2. Dredging.
Ventura Harbor	355,000 (0) (355,000)	2,288,000 (0) (2,288,000)	1. None. 2. Dredging.

6 FEB 1995

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. NAVIGATION (Cont'd)

a. Channels and Harbors (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
CALIFORNIA (Cont'd)			
Yuba River	32,000 (11,000) (21,000)	30,000 (11,000) (19,000)	1. None. 2. None.
Other Projects Maintained Periodically	9,023,000 (221,000) (8,802,000)		
TOTAL - Channels and Harbors	37,052,000 (2,750,000) (34,302,000)	36,567,000 (1,784,000) (34,783,000)	

b. Locks and Dams - None

	FY 1995	FY 1996
TOTAL - NAVIGATION	37,052,000 (2,750,000) (34,302,000)	36,567,000 (1,784,000) (34,783,000)

6 FEB 1995

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. FLOOD CONTROL

a. Reservoirs

The program request of $31,947,000 provides for the operation and maintenance of 20 flood control projects and scheduling of flood control reservoir operations at operating publicly owned and Bureau of Reclamation projects in the Division. The request also includes the requirements for operation and maintenance of recreation facilities at reservoir projects. The amount requested is necessary for operation and ordinary maintenance of project facilities; labor, supplies, replacements; and contract law enforcement. The requested amount also includes application of special recreation use fees for recreation areas.

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
ARIZONA			
Alamo Lake	1,031,000	1,167,000	
	(866,000)	(975,000)	1. Periodic inspection of dam including monument survey in FY 96.
	(165,000)	(192,000)	2. None.
Painted Rock Dam	937,000	3,736,000	
	(809,000)	(798,000)	1. None.
	(128,000)	(2,938,000)	2. Repair gaging station and provide seepage control.

8 FEB 1995

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. FLOOD CONTROL (Cont'd)

a. Reservoirs (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
ARIZONA (Cont'd)			
Whitlow Ranch Dam	108,000	112,000	
	(71,000)	(71,000)	1. None.
	(37,000)	(41,000)	2. None.
CALIFORNIA			
Black Butte Lake	1,568,000	1,534,000	
	(1,568,000)	(1,534,000)	1. None.
	(0)	(0)	2. None.
Buchanan Dam - H.V. Eastman Lake	1,575,000	1,529,000	
	(1,575,000)	(1,439,000)	1. None.
	(0)	(90,000)	2. None.
Coyote Valley Dam - Lake Mendocino	2,708,000	2,410,000	
	(2,158,000)	(2,410,000)	1. None.
	(550,000)	(0)	2. None.
Dry Creek (Warm Springs) Lake and Channel	3,069,000	3,172,000	
	(3,069,000)	(3,172,000)	1. None.
	(0)	(0)	2. None.

6 FEB 1995

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. FLOOD CONTROL (Cont'd)

a. Reservoirs (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
CALIFORNIA (Cont'd)			
Farmington Dam	238,000 (238,000) (0)	158,000 (158,000) (0)	1. Periodic inspection and environmental assessment in FY 95. 2. None.
Hidden Dam - Hensley Lake	1,799,000 (1,799,000) (0)	1,705,000 (1,705,000) (0)	1. None. 2. None.
Isabella Lake	729,000 (729,000) (0)	702,000 (702,000) (0)	1. None. 2. None.
Los Angeles County Drainage Area	3,242,000 (1,622,000) (1,620,000)	3,413,000 (1,589,000) (1,824,000)	1. None. 2. Maintain 38 miles of flood control channel.

6 FEB 1995

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. FLOOD CONTROL (Cont'd)

a. Reservoirs (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
CALIFORNIA (Cont'd)			
Merced County Stream Group	216,000	172,000	
	(216,000)	(172,000)	1. Periodic inspection in FY 95.
	(0)	(0)	2. None.
Mojave River Dam	209,000	217,000	
	(151,000)	(143,000)	1. None.
	(58,000)	(74,000)	2. None.
New Hogan Lake	1,450,000	1,529,000	
	(1,325,000)	(1,529,000)	1. Increased inspections and natural resource management study in FY 96.
	(125,000)	(0)	2. None.
Pine Flat Lake	2,431,000	2,451,000	
	(1,966,000)	(2,431,000)	1. Increased efforts on dam safety assurance study in FY 96.
	(465,000)	(20,000)	2. None.

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. FLOOD CONTROL (Cont'd)

a. Reservoirs (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
CALIFORNIA (Cont'd)			
Santa Ana River Basin	2,398,000	2,889,000	
	(1,345,000)	(1,646,000)	1. Increased environmental management and real estate compliance inspections in FY 96.
	(1,053,000)	(1,243,000)	2. None.
Sepulveda Dam	995,000	0	
	(0)	(0)	1. None.
	(995,000)	(0)	2. None.
Success Lake	2,535,000	2,358,000	
	(2,335,000)	(2,228,000)	1. None.
	(200,000)	(130,000)	2. None.
Terminus Dam (Lake Kaweah)	1,414,000	1,474,000	
	(1,414,000)	(1,344,000)	1. None.
	(0)	(130,000)	2. None.

6 FEB 1995

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

2. FLOOD CONTROL (Cont'd)

a. Reservoirs (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
NEVADA			
Martis Creek Lake, Nevada and California	431,000 (431,000) (0)	378,000 (378,000) (0)	1. None. 2. None.
Pine-Mathews Canyons Lakes	194,000 (137,000) (57,000)	163,000 (93,000) (70,000)	1. None. 2. None.
Scheduling Reservoir Operations	963,000 (963,000) (0)	678,000 (678,000) (0)	1. Environmental assessments in FY 95. 2. None.
TOTAL - Reservoirs	30,240,000 (23,407,000) (6,833,000)	31,947,000 (25,195,000) (6,752,000)	

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SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

b. Channel Improvements, Inspections and Miscellaneous Maintenance

The program request of $1,352,000 provides for the inspection of completed works during the budget year.

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	ESTIMATED OBLIGATIONS ($) FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
Inspection of Completed Works	1,762,000 (1,762,000) (0)	1,352,000 (1,352,000) (0)	1. Decrease in number of inspections to be performed in FY 96. 2. None.
TOTAL - Channel Improvements, Inspections and Miscellaneous Maintenance	1,762,000 (1,762,000) (0)	1,352,000 (1,352,000) (0)	
TOTAL - FLOOD CONTROL	32,002,000 (25,169,000) (6,833,000)	33,299,000 (26,547,000) (6,752,000)	

3. MULTIPLE PURPOSE POWER PROJECTS

The program request of $893,000 for the operation and maintenance of the channel below the multiple purpose New Melones Lake project provides the amount for operation requirements of recreation and natural resource facilities along the Stanislaus River downstream of the dam. The amount requested is necessary for operation and maintenance of downstream channel facilities; labor, supplies, materials, and parts required for the day-to-day functioning of the channel project.

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

3. MULTIPLE PURPOSE POWER PROJECTS (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
CALIFORNIA			
New Melones Lake	876,000	893,000	
(Downstream Channel)	(876,000)	(893,000)	1. None.
	(0)	(0)	2. None.
TOTAL - MULTIPLE PURPOSE	876,000	893,000	
	(876,000)	(893,000)	
	(0)	(0)	

4. PROTECTION OF NAVIGATION

The program request of $3,887,000 provides for removal of drift and debris; and project condition surveys on some projects for which maintenance is not scheduled in the budget year.

Drift Removal			
San Francisco Harbor and	2,197,000	2,195,000	
Bay (Drift Removal), CA	(0)	(0)	1. None.
	(2,197,000)	(2,195,000)	2. Remove debris from navigation channels.
Project Condition Surveys	1,035,000	1,692,000	
	(1,035,000)	(1,692,000)	1. Increase in number of surveys to be performed in FY 96.
	(0)	(0)	2. None.

6 FEB 1995

SOUTH PACIFIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

4. PROTECTION OF NAVIGATION (Cont'd)

State/ Project Name	ESTIMATED OBLIGATIONS ($) FY 1995 Total (Operations) (Maintenance)	FY 1996 Total (Operations) (Maintenance)	Reason For Change And Major Maintenance Items 1. Reasons for change in Operations from FY 1995 to FY 1996 (10%+/-) 2. Major Maintenance Items Budgeted in FY 1996 (Threshold $500,000)
TOTAL - PROTECTION OF NAVIGATION	3,232,000 (1,035,000) (2,197,000)	3,887,000 (1,692,000) (2,195,000)	
GRAND TOTAL - SOUTH PACIFIC DIVISION	73,162,000 (24,952,000) (48,210,000)	74,646,000 (30,916,000) (43,730,000)	

6 FEB 1995

NORTHERN CALIFORNIA FLOODING

Mr. FAZIO. You can see General Scott has taken on some local color.

Mr. MYERS. Mr. Fazio.

Mr. FAZIO. Thank you, Mr. Chairman.

We may have a vote at some point here. I guess we can trade off and try to keep this hearing going.

I want to thank all of you for your work on the flooding. We happen to have these periodically. It may not be over, as you know. This was a result of an incredible downpour, not the snowpack runoff which was our problem in 1986, the last time our system was stressed in Northern California.

I am certainly hopeful that we are managing our reservoirs with the State, DWR, and the Bureau to be ready for whatever comes, in the event of warm spring rains, in, frankly, March, and April. We are very close.

PROGRAM EXECUTION

And I also want to congratulate you on your extraordinary completion rate that you referenced for the region. Obviously it is very important to this Member, and I am sure Mr. Riggs when he joins us will reiterate his interest in the work you are doing.

NEW FLOOD CONTROL CRITERIA

But I wanted to follow up on some questions asked the other day. I know that some of the people heard me blow my stack. I saw that map when you pointed out the counties affected by flooding. What would happen to California as one example in your region, I guess, the largest in population, if this criteria, which requires, for example, half or more of the floodwaters to emanate in another State, were applied. How would it affect that map that you showed us?

General SCOTT. Well, Mr. Fazio, obviously for—in reference to California, you are correct, virtually all of the water that runs in California streams and rivers originates in the State of California, with one or two northern, rare exceptions.

Mr. FAZIO. There might be some rivers that flow into the northernmost counties that come from Oregon.

General SCOTT. That is correct.

Mr. FAZIO. They may or may not at any given time provide justification.

General SCOTT. That is correct.

Mr. FAZIO. It is a close call. But that would be a very, very small portion of all the work you have done.

For example, the Santa Ana River project that you have reassured us the Flood Control District in Orange County can help pay for, would not have been permitted to go forward; is that correct?

General SCOTT. Under the new proposed policy, that would not have been a river of national significance.

Mr. FAZIO. You talked about the amount of money, $3 million, next year for proceeding on the American River watershed investigation. All that we have spent up to this point would be terminated and there would be no follow-on, not even a reduced cost share of 75 to 25 percent would apply to the American River, Sacramento River flood problem; is that correct? In the future we would be, in effect, unable to proceed to construction.

General SCOTT. That is correct, Mr. Fazio, based on the 50 percent criteria for out of State waters.

Mr. FAZIO. Right. All of that flood threat, which FEMA remains vulnerable to helping us repair, mitigate, insure for, is off the table; is that right?

General SCOTT. That is correct.

SOUTH PACIFIC DIVISION WORKLOAD IMPACTS

Mr. FAZIO. It seems a little bit penny wise and pound foolish. Pretty much your region might as well close up shop and move somewhere else. It would be a little ironic to have you located in San Francisco when all your workload was somewhere else. Where would it be in that region? Have you had a chance to evaluate that?

General SCOTT. Mr. Fazio, as you know, we are proceeding with, of course, the Santa Ana, and we are going to proceed this year with the Tropicana and Flamingo Washes. We still have some important ones to do. But as far as looking at where water originates, by and large——

Mr. FAZIO. You would be working your way out of business.

General SCOTT. We would have a lot of business but that might come to that, yes, sir.

Mr. FAZIO. Unless we reverse that criteria and changed it somehow, which I am hopeful obviously this Committee would do.

I hope you can provide for the record a detailed discussion of the impacts of this criteria on the region that you are speaking to today. I think it would be interesting for not only my colleagues in my State but for others who are in other States in this region, those 60-some Members of Congress.

General SCOTT. Yes, sir, I would be pleased to provide that for the record.

[The information follows:]

SOUTH PACIFIC DIVISION
IMPACT OF ADMINISTRATION POLICY CHANGES ON FY 1996 GENERAL INVESTIGATIONS PROGRAM

STUDY/PROJECT	TOTAL PROGRAM TO OMB	ADMIN POLICY REVISION	REVISED FY 96 REQUEST	REASON
	$22,436			
NAPA RIVER, SALT MARSH RESTORATION, CA	200	(200)	0	NEW RECONNAISSANCE DELETED
PENINSULA BEACH, CA	300	(300)	0	NEW RECONNAISSANCE DELETED
PROVO AND VICINITY, UT	300	(300)	0	NEW RECONNAISSANCE DELETED
RUSSIAN RIVER ENVIRONMENTAL RESTORATION, CA	100	(100)	0	NEW RECONNAISSANCE DELETED
TRUCKEE MEADOWS, NV	500	(500)	0	NEW RECONNAISSANCE DELETED
VENTURA AND SANTA BARBARA COUNTY SHORELINE, CA	300	(300)	0	NEW RECONNAISSANCE DELETED
ENCINITAS, CA	200	(31)	169	FEASIBILITY FUNDS DELETED
GILA RIVER, NORTH SCOTTSDALE DRAINAGE, AZ	450	(50)	400	FEASIBILITY FUNDS DELETED
GILA RIVER, TORTOLITA DRAINAGE AREA, AZ	300	(100)	200	FEASIBILITY FUNDS DELETED
LOWER TRUCKEE RIVER, NV	300	(300)	0	FEASIBILITY FUNDS DELETED
NORTHERN CALIFORNIA STREAMS, CACHE CREEK ENVIRONMENTAL,	250	(50)	200	FEASIBILITY FUNDS DELETED
NORTHERN LOS ANGELES COUNTY, CA	300	(300)	0	FEASIBILITY FUNDS DELETED
SACRAMENTO - SAN JOAQUIN DELTA, LITTLE HOLLAND, CA	300	(10)	290	FEASIBILITY FUNDS DELETED
SACRAMENTO - SAN JOAQUIN DELTA, WESTERN DELTA ISLANDS, CA	300	(300)	0	FEASIBILITY FUNDS DELETED
SAN ANTONIO CREEK, CA	350	(200)	150	FEASIBILITY FUNDS DELETED
SAN JOAQUIN RIVER BASIN, FIREBAUGH AND MENDOTA, CA	150	(150)	0	FEASIBILITY FUNDS DELETED
SAN JOAQUIN RIVER BASIN, TULE RIVER CA	100	(100)	0	FEASIBILITY FUNDS DELETED
SANTA BARBARA COUNTY STREAMS, LOWER MISSION CREEK, CA	300	(219)	81	FEASIBILITY FUNDS DELETED
SILVER STRAND SHORELINE, CA	200	(200)	0	FEASIBILITY FUNDS DELETED
UPPER PENITENCIA CREEK, CA	350	(350)	0	FEASIBILITY FUNDS DELETED
KAWEAH RIVER, CA	300	(300)	0	PED FUNDS DELETED
OCEAN BEACH, CA	50	(50)	0	PED FUNDS DELETED
SAN CLEMENTE CREEK, CA	170	(170)	0	PED FUNDS DELETED
TOTAL ADMINISTRATION POLICY REVISIONS		(4,580)		
REVISED FY 1996 GENERAL INVESTIGATIONS BUDGET REQUEST		17,856		

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SOUTH PACIFIC DIVISION
IMPACT OF ADMINISTRATION POLICY CHANGES ON FY 1996 CONSTRUCTION GENERAL PROGRAM

PROJECT NAME	TOTAL COST	FEDERAL COST	NON-FED COST	ALLOC THRU FY95	BAL TO COMPL	FY 1996		COMPLETION	
						RECOMM	BUDGET	RECOMM.	BUDGET
CLIFTON, AZ	15,300	9,900	5,400	8,833	1,067	1,800	900	DEC 96	DEC 96
HOLBROOK, AZ	14,600	11,000	3,600	8,739	2,261	2,261	2,261	MAY 96	MAY 96
LOS ANGELES COUNTY DRAINAGE AREA, CA	460,000	283,000	177,000	10,450	272,550	21,000	11,367	SEP 02	1/
LOS ANGELES HARBOR, CA	401,000	101,000	300,000	4,630	96,370	1,200	100	SEP 01	1/
MORRO BAY HARBOR, CA	2,600	2,200	400	2,076	124	264	124	NOV 95	NOV 95
NOGALES WASH, AZ	10,400	6,400	4,000	1,559	4,841	2,800	75	AUG 99	1/
RILLITO RIVER, AZ	33,500	25,000	8,500	16,106	8,894	8,894	4,894	JAN 97	JAN 97
SAN DIEGO RIVER & MISSION BAY, CA	3,400	2,200	1,200	300	1,900	1,900	0	DEC 96	UNPROG
SANTA ANA RIVER MAINSTEM, CA	1,333,000	778,000	555,000	395,626	382,374	51,900	70,249	SEP 00	1/
SANTA PAULA CREEK, CA	21,900	17,100	4,800	8,197	8,903	300	300	SEP 99	1/
SURFSIDE-SUNSET AND NEWPORT BEACH, CA	51,100	34,240	16,860	16,368	17,872	5,592	100	INDEF	INDEF
TROPICANA & FLAMINGO WASHES, NV	231,000	169,900	61,100	15,651	154,249	8,200	4,000	SEP 01	1/
SUBTOTALS - LOS ANGELES	2,577,800	1,439,940	1,137,860	488,535	951,405	106,111	94,370		

SOUTH PACIFIC DIVISION
IMPACT OF ADMINISTRATION POLICY CHANGES ON FY 1996 CONSTRUCTION GENERAL PROGRAM

PROJECT NAME	TOTAL COST	FEDERAL COST	NON-FED COST	ALLOC THRU FY95	BAL TO COMPL	FY 1996 RECOMM	FY 1996 BUDGET	COMPLETION RECOMM.	COMPLETION BUDGET
COYOTE & BERRYESSA CREEKS, CA	78,200	41,850	36,350	19,210	22,640	12,000	12,000	SEP 97	SEP 97
GUADALUPE RIVER, CA	137,770	63,300	74,470	30,250	33,050	16,000	8,100	SEP 98	1/
LOWER SACRAMENTO RIVER LEVEES, CA	5,200	3,900	1,300	1,535	2,365	1,000	0	SEP 99	UNPROG
MARYSVILLE/YUBA CITY RECONSTRUCTION, CA	31,000	23,300	7,700	5,637	17,663	6,000	6,000	SEP 99	1/
MERCED COUNTY STREAMS, CA	124,500	85,900	38,600	15,548	70,352	700	700	UNSCH	INDEF
MID-VALLEY LEVEES, CA	22,600	17,000	5,600	2,222	14,778	500	0	SEP 00	UNPROG
SACRAMENTO BANK PROTECTION PROJECT, CA	159,100	112,200	46,900	88,272	23,928	2,000	3,000	SEP 99	1/
SACRAMENTO RIVER DEEP WATER SHIP CHANNEL, CA	50,000	24,900	24,800	7,717	17,183	2,500	100	SEP 00	1/
SACRAMENTO RIVER FLOOD CONTROL PROJECT (DEFICIENCY CORRECTION), CA	172,003	76,375	95,628	76,275	100	900	100	UNSCH	INDEF
SACRAMENTO URBAN AREA LEVEE RECONSTRUCTION,	46,800	28,600	18,000	24,903	3,697	2,710	1,870	SEP 98	SEP 98
WEST SACRAMENTO, CA	20,200	15,200	5,000	2,347	12,853	7,000	7,000	JAN 98	1/
WILDCAT & SAN PABLO CREEKS, CA	32,800	17,700	15,100	16,460	1,240	1,600	1,240	SEP 98	SEP 98
YOLO BASIN WETLANDS, CA	12,000	7,170	4,830	6,450	720	720	720	NOV 95	NOV 95
SUBTOTALS - SACRAMENTO	892,173	517,595	374,278	296,826	220,769	53,630	40,830		
OAKLAND HARBOR, CA	119,150	89,235	29,790	38,169	51,066	24,000	14,000	APR 97	APR 97
RICHMOND HARBOR, CA	33,050	25,750	7,250	7,879	17,871	7,300	3,296	FEB 97	FEB 97
SAN FRANCISCO BAY TO STOCKTON, CA	202,300	172,250	29,270	63,979	108,271	800	800	DEC 99	1/
SONOMA BAYLANDS WETLANDS DEMONSTRATION, CA	8,500	6,375	2,125	5,875	500	8,600	500	DEC 97	1/
SUBTOTALS - SAN FRANCISCO	363,000	293,810	68,435	115,902	177,708	40,700	18,596		
SOUTH PACIFIC DIVISION TOTALS	3,832,973	2,251,145	1,580,573	901,263	1,349,882	200,441	153,796		

1/ BEING DETERMINED

CORPS OPERATIONS AND MAINTENANCE PROJECTS THAT WOULD BE TURNED OVER TO NON-FEDERAL INTERESTS IN FY 1998

STATE	PROJECT NAME
	Navigation Projects
CA	Berkeley Marina
CA	Channel Islands Harbor
CA	Dana Point Harbor
CA	Fisherman's Wharf
CA	Larkspur Ferry Navigation Channel
CA	Los Angeles - Long Beach Harbors Model
CA	Los Angeles River Estuary
CA	Marina del Rey
CA	Monterey Harbor
CA	Napa River
CA	Newport Bay Harbor
CA	Oceanside Harbor
CA	Oceanside Sand Bypass System
CA	Petaluma River
CA	Pillar Point Harbor
CA	Redondo Beach - King Harbor
CA	Sacramento River Shallow Draft Channel
CA	San Diego River and Mission Bay
CA	San Leandro Marina - Jack D. Maltester Channel
CA	San Rafael Creek
CA	Santa Barbara Harbor
CA	Santa Cruz Harbor
CA	Suisun Channel
CA	Ventura Harbor
	Flood Control Projects
AZ	Whitlow Ranch Dam
CA	Black Butte Lake
CA	Buchanan Dam - H.V. Eastman Lake
CA	Coyote Valley Dam - Lake Mendocino
CA	Dry Creek (Warm Springs) Lake and Channel
CA	Farmington Dam
CA	Hidden Dam - Hensley Lake
CA	Isabella Lake
CA	Los Angeles County Drainage Area
CA	Merced County Stream Group
CA	Mojave River Dam
CA	New Hogan Lake
CA	Pine Flat Lake
CA	Sacramento River Debris Control
CA	Santa Ana River Basin
CA	Success Lake
CA	Terminus Dam (Lake Kaweah)
NV	Pine-Matthews Canyons Lakes

NAVIGATION WORK

General SCOTT. Obviously, Mr. Fazio, we would continue our important navigation work. I did cite some of the—certainly Long Beach, Los Angeles——

Mr. FAZIO. Harbors are not affected unless they are recreational harbors.

General SCOTT. That is right. Los Angeles and Oakland, we are continuing with some significant projects there. So we would obviously have that mission continuing, sir.

AMERICAN RIVER WATERSHED

Mr. FAZIO. I wanted you to speak on the American River watershed investigation. This is an area with, obviously, 400,000 people, many of whom are my constituents, and $38 billion in assessed property valuation.

I just wanted to see if you could help me understand the status of the studies and the engineering design work that you have underway, because we have to be very careful to meet the requirements of a 1996 water resources authorization, assuming we have one. I would like to make that assumption. I would like to act on that basis.

Could you give me an update on our progress?

General SCOTT. I would be delighted to, Mr. Fazio. As you are aware and as I alluded to in the opening statement, we are in the process of a supplemental information report which was directed. We expect the draft to be out in July of this year, 1995. We currently are proceeding with the two plans.

One is the NED plan. You are familiar with it as having a detention basin somewhere, and the other plan is the alternative plan, which would involve reoperation of Folsom Reservoir in addition to levee improvements downstream.

We also are anticipating in May of this year, 1995, a National Academy of Engineers Report on their evaluation of the system. We are, on another aspect of the American River, we have just gotten final agreement on a Finding of No Significant Impact for the reoperation of Folsom Dam, which provides even greater flood protection downstream. That is to be signed shortly, if not this week.

Mr. FAZIO. Are we well over 200-year protection now in the nondam alternative? The improvements at Folsom and the levee improvements? Is that your assumption going into this study? Not to say that we have to hold you to these assumptions. That is what these are for. But I am just wondering.

General SCOTT. Mr. Fazio, that is what we are looking for, but to be honest we don't have the final report, and until we see that, I think it would be premature to comment on that. That is what our objective is, absolutely.

Mr. FAZIO. The new findings you just cited lead in that direction.

General SCOTT. And we are leading in that direction, yes, sir.

SACRAMENTO RIVER FLOODWALL

Mr. FAZIO. Let me go on because I have a lot of questions to ask you. Could you give us some more information on the progress on the Sacramento River wall. General Hunter and I talked about that last year. Apparently we have really made some progress in terms of coming to closure on whether or not this is something that the Corps can be of help to us on.

General SCOTT. I am pleased to report to you on the Sacramento Urban Floodwall stabilization project. As you are aware, initial State estimates came in at about $6 million. We have looked at that. Our estimate, and the sponsor concurs, the Reclamation Board; it comes in at about a little under a million dollars to be cost shared 75–25.

We are comfortable that we are going to be able to proceed with construction this year, in August of 1995. We—and it will take—the construction period is about 13 months. The actual construction time is less than that, simply because we have the mitigation because of the Swainson's hawk, there are times of the year we cannot construct. We are very pleased it is $1 million as opposed to the $6 million. We will be able to stabilize the floodwall.

Mr. FAZIO. Do you have sufficient funds to do that in the current budget?

General SCOTT. We do.

Mr. FAZIO. I have questions on both of those that I will place in the record.

[The information follows:]

AMERICAN RIVER WATERSHED

Mr. FAZIO. Is the project on schedule for completion in time for Congressional consideration?

General SCOTT. We have had an objective for preparing the Supplemental Information Report to be available for Congressional consideration in Water Resources Development Act, of 1996; we are still on schedule to meet this objective.

Mr. FAZIO. What is the Corps' capacity for this project in FY 1996?

General SCOTT. The President's budget includes $3 million for continued study and design efforts which will be adequate to complete anticipated efforts.

WEST SACRAMENTO

Mr. FAZIO. The West Sacramento project, it is one of two starts we made, a start last year which we can build on this year. I am pleased that we made that initial investment.

This affects, you know, 30,000 people west of the City of Sacramento. It happens to be where I am from, and I am particularly anxious to protect my property. Let me say that on the record.

Now, we have 30,000 people and $1.2 worth of damageable property in the floodplain. I wonder if you can give us an assessment of where we are in completing that project.

General SCOTT. I am pleased to report we are on schedule with that project. We have a PCA scheduled to be signed in September 1995. I am confident we will meet that. And as you are aware, with completion of the West Sacramento levee improvement, we hope to be able to give your house and many others 400 years of protection.

Mr. FAZIO. What is the total cost on that?

General SCOTT. It is about $20 million, Mr. Fazio.

Mr. FAZIO. Cost shared?

General SCOTT. Cost shared in accordance with the Act of 1986, yes, sir.

WINTERS, CALIFORNIA

Mr. FAZIO. I wanted to thank you also for your quick response to dealing with the Winters area flooding. Could you update me on the status of that Winters project?

General SCOTT. As you know, Mr. Fazio, we have an ongoing study on the Winters area. In the most recent January flooding, about 40 homes were flooded, and we are now looking at the hydraulic data.

Some of it, as you know, it is our best estimate of what we think it is. We are relooking that study. That study will be completed in July this year, and I can't anticipate the outcome, but we are folding in the new data experienced by the most recent January flood.

Mr. FAZIO. And the next step would be to proceed to a cost-shared study?

General SCOTT. A cost-shared feasibility study, reconnaissance being done, feasibility at a 50–50 cost share.

Mr. FAZIO. We would be—given this year's criteria, what would happen, for example, to a project like that?

General SCOTT. In this project we would continue because there are funds for feasibility study. We would—therefore it was funded for feasibility. We would continue this project.

Mr. FAZIO. To the point of completing the study?

General SCOTT. To the point of completing the feasibility study, yes, sir.

Mr. FAZIO. This is just another example where, as I said the other day, we lead people to the altar, then walk away and let them pay for the wedding. So we would complete every study underway, whether it is reconnaissance or feasibility.

The question is, what is the next step. We wouldn't take it from reconnaissance to feasibility. We wouldn't take it if it were from feasibility to construction.

General SCOTT. That is correct, yes, sir.

HAMILTON CITY

Mr. FAZIO. Hamilton City, I know the Corps was very helpful in looking at the floods of this past couple of months. I was up there with your folks from the Sacramento District, and I really appreciated the attention they gave.

We had a private levee that was threatened there, but there is also really a need to protect a growing small rural community in Hamilton City.

I wondered if you can tell us what Corps programs might be helpful currently in law to help alleviate the need to constantly evacuate the community and improve the levees along the Sacramento River that need to protect it.

General SCOTT. Mr. Fazio, I think you are aware, we have studied that area in the past, and I know Colonel Reese, my Sacramento District Engineer, was with you on that levee.

Mr. FAZIO. Very helpful. We appreciated the time he took with us.

General SCOTT. Our past analysis on other studies have not demonstrated a Federal interest to continue to proceed beyond the reconnaissance phase. If directed, we could look at that under some existing authority to see perhaps if some of the recent data from the January flooding——

Mr. FAZIO. We have a Small Projects Program, under $5 million, is that the criteria?

General SCOTT. Continuing authority, yes, sir.

Mr. FAZIO. That is something that can be done without authorization, is that correct, as long as there is funding available in that category? I mean, the general program is authorized. The specific program doesn't need to be; is that correct?

General SCOTT. That is correct. As you are aware, sir, that total Federal limit is $5 million under that program.

Mr. FAZIO. That is for the entire Federal cost or the total cost.

General SCOTT. Start to finish, not just construction cost. Federal cost.

Mr. FAZIO. In this case we have an updated census which I think reflects a new housing tract that has gone in, and some other information that indicates that we might not have had an accurate one in the first place. We have a large Hispanic population there that migrates, and it is difficult sometimes to get an accurate census in this rural community.

My understanding is that the local Corps officials believe we may now have the population required to proceed on it. If that were satisfactory and that met our criteria, is that the holdup? Is that what is making it impossible for us to proceed so far?

General SCOTT. As you know, when we make the determination, it is the benefit-cost ratio. And all of those factors, sir, you have mentioned go into that benefit-cost ratio.

If they have significantly changed, we change that ratio. The answer to your question is yes.

Mr. FAZIO. I think that in fact is the view of the people that you have in the Sacramento area. Colonel Reese's staff, I believe, has looked at that. I hope will you look at it with him, because it may make a difference and do a lot for these folks.

General SCOTT. I would be delighted to relook that issue, sir.

MARYSVILLE/YUBA CITY LEVEE RECONSTRUCTION

Mr. FAZIO. We have broken ground, apparently, on the Yuba City-Marysville project. It was really an outgrowth of the 1986 floods and the levee break there. Damage was quite significant, and we began assessing the value of that property and the strength of the levees. We have now gone beyond that.

Could you describe the nature of the work you have done and will continue to undertake in 1995?

General SCOTT. I would be delighted, Mr. Fazio. The Yuba City-Marysville project, we looked at all the levees to make a determination of which were the appropriate ones. We have identified 22 miles of levees that we will work on. Economically viable, those 22, of the 134 miles.

So we have identified those. We signed a PCA in July of 1994, and will award a construction contract in May of this year. We are actually at the end of the current rainy season. When we can begin in May of this year, we are proceeding with the construction.

We have $6 million in the budget, which is adequate for what we need to do, and——

Mr. FAZIO. The total cost of the project is——

General SCOTT. It is about $31 million.

Mr. FAZIO. So we are making a real large incremental start.

General SCOTT. Absolutely.

Mr. FAZIO. And that of course gets to continue.

General SCOTT. It would so continue.

Mr. FAZIO. You mentioned there are a number of—I have forgotten the number you said we have studied—but 22 out of what was the number we studied on Sacramento?

General SCOTT. On this particular—as you know we do an incremental analysis. On Marysville-Yuba City, we looked at 134 miles of levee——

Mr. FAZIO. On the——

General SCOTT. Encompassed on this region of the river, and we actually identified 22 miles.

SACRAMENTO RIVER LEVEE RECONSTRUCTION

Mr. FAZIO. This was a result of the study that we asked you to do following the flooding of 1986. It brings to mind the real struggle between urban versus rural. And some of this was studied, of course, on the Mississippi recently.

Your position on the other stretches of those rivers is that they cannot justify the increased levee protection?

General SCOTT. In all cases, that may not be the answer, sir. We do this analysis based on the condition of the levee, this is levee reconstruction, the condition of the levee and also on the various segments of the river, we have five of them, and we look at an incremental analysis on the cost benefit, on how in that particular region, whether it is lower Sacramento or upper Sacramento or anywhere in between, and that is how we base our analysis, and then once we do that we look at whatever number of sites we think would be appropriate and then we go and do the final analysis on what levee reconstruction to return to original grade needs to be done, sir.

Mr. FAZIO. So what you are suggesting is while we may not be in a position to improve those or increase the freeboard or what have you, we may be in a position to go back and repair them to a standard that we theoretically had in the past? Is that correct?

I am enjoying watching the faces of the folks back here in Washington as you respond. You may be making policy right here.

General SCOTT. I may have to turn around occasionally.

Mr. FAZIO. Don't worry about it. I will let you know.

General SCOTT. Again, as you are aware, Mr. Fazio, we look at the whole Sacramento River system in increments. For example, on mid-valley, 10 to 20 miles we identified. In the lower Sacramento we identify two of 47 miles that were economically viable.

So yes, that is how we do it. We look at it, we analyze it, and then the original legislation said return to original grade. That is what we are doing. We are returning to the original capacity of the——

RURAL FLOOD PROTECTION

Mr. FAZIO. And that is assuming these are agricultural lands, and therefore of less value than urban lands?

General SCOTT. Again, we divided the river, and where the river flowed, we based the analysis based on that——

Mr. FAZIO. But this relates again back to this study of the Mississippi. Some of my rural counties are concerned that they can't get the kind of levee improvements, protection that they would want. They have small communities, they have lots of farm properties.

We saw what siltation can do to an agricultural community, a farmer's field. There are values that the Federal Government attaches to that.

We have programs in FEMA, we have programs in USDA, that compensate people for loss. How does that compute and relate to the study that you've done?

BENEFIT-COST ANALYSIS

I mean, in other words, are we overly focused on urban values? Or is there some point where we might make improvements in rural levees that would protect us from other costs coming at us from other directions in the Federal budget?

General SCOTT. Mr. Fazio, I would hesitate to answer that from a national policy perspective. What we have is pretty clear guidance on our analysis dating back from the 1930's, on how we do a cost-benefit analysis of what we take into consideration, the population, the number of families living, the agriculture.

We put all of that and we look at it to come up with what we believe the correct economic analysis is. Based on that, we have determined historically whether or not there is a Federal interest. So we don't make any distinction between urban and rural. However, in the economic analysis, that plays its own factor, obviously.

Mr. FAZIO. I think it is automatic, isn't it? We don't have to say it. It just almost flows directly out of the land values that we have.

General SCOTT. Yes, sir, it does, obviously.

Mr. FAZIO. I think we shouldn't be too concerned about saying what is the reality.

General SCOTT. The reality is that the higher value of the area you are protecting, the greater the effect it has on the benefit-cost ratio. That is correct, yes, sir.

Mr. FAZIO. Let me pursue that more on the record because that is of great interest to people in my district from one end to the other. From one end to the other we have the benefits and the costs of that. I really need to pursue this line of questioning with you because there are an awful lot of rural communities that are asking for additional assistance. They can't grow even where they want to without additional levee protection.

I think I am in charge of this committee now, and I am wondering what I can do. It won't be to adjourn. I haven't been Mr. Chairman for several months now and it feels good.

BLACK BUTTE RESERVOIR

Let me ask you about the Black Butte and Stony Creek projects. The Black Butte Reservoir and Stony Creek were part of, I think, a lot of the success we had on the 1995 flooding we just experienced.

Could you talk about the Corps' operation of those facilities and how it prevented further flooding in the Sacramento River?

Because I want to say publicly what you said the other day, the system we have out there of flood control structures, worked perfectly in our most recent flooding. You might want to speak to that in the context of Black Butte and Stony Creek.

General SCOTT. Mr. Chairman, I would be delighted to speak to that. Black Butte performed absolutely perfectly during the recent January flooding. We kept the release within the downstream channel, and by our estimates alone, Black Butte alone prevented about $8.2 million of damage downstream.

It operated perfectly, and in the Sacramento system it is a system of bypasses, as you are so well aware, weirs and flood control through regulating the outflow of the various dams that we have to ensure we keep the flooding water in the channels it must stay in.

Mr. FAZIO. Do we have any improvements that we need to make to keep those facilities in operation?

General SCOTT. I am unaware, Mr. Fazio, of any improvements that we need, other than——

Mr. FAZIO. Can we get more protection? There is an awful lot of talk about trying to make more off stream reservoir capacity available on the west side of the Sacramento Valley, just as we have on the east side of the San Joaquin, to try to regulate the seeming feast and famine we have of drought and flood, to really not so much provide additional water for irrigation, which would be one of the benefits, but to help protect us from the kind of extremes that we have been experiencing in recent years by regulating flows that not only are for reclamation, irrigation facilities, but in the river itself.

General SCOTT. Although I haven't looked at an extensive analysis, Mr. Fazio, my understanding and my engineer's understanding is that Black Butte is maximized at its current capacity. I don't believe there is anything economically viable that we could do to rework that particular——

POTENTIAL NEW FACILITIES

Mr. FAZIO. But there are other potential sites. Cottonwood was mentioned a few years ago, it was said to be a leaker. Today we call it groundwater recharge. It is a little like pork and infrastructure.

I would like to come back another time, and we might take some of these issues up in the record, of alternative facilities for not only flood control, but water storage facilities that I can stipulate would be the kind that would be locally supported and acceptable, I think, in many cases to the environmental community.

GLEN-COLUSA IRRIGATION DISTRICT

I have to go vote shortly. Let me ask you about the Glen-Colusa Irrigation District, the Riffle Restoration project has been before this committee for a number of years. We provided funding last year that has, I think, not necessarily as in years past, been spent.

Could you give me an update of how you feel this project interrelates to the ongoing fish restoration problems we have at GCID and with the Bureau at that location?

General SCOTT. Yes, Mr. Fazio. If I could I would like to just go over a little bit of where we are with that particular project. As you are aware, in 1970 there was a cutoff in oxbow—a cutoff of an oxbow that allegedly has resulted in about a three-foot degrading of the riverbed.

Subsequently, we have looked at ways—especially for winter-run salmon, we are trying to keep the salmon out of being sucked into the screens of the two pumps that the Glen-Colusa Irrigation District has.

The Corps' involvement has been to facilitate finding a solution to this difficult issue. It comes down to either the replacement of those screens, and that is a Bureau of Reclamation responsibility, about a $40 million project, or perhaps relocation of the pumps, and that may or may not—the Corps involvement would be additional involvement, construction, would be the riffle restoration, if that feature, based on the ultimate decision, were required. So that is where we are.

BUREAU OF RECLAMATION FUNDING

Mr. FAZIO. There is some funding that we provided you in 1995, $400,000. We need the Bureau to obtain at least $300,000 of that in order to stay the course on the joint EIR–EIS that they are doing with fish and game, Fish and Wildlife, and everyone else in both bureaucracies in that site. It takes an awful lot of my time for a very finite problem, solution.

I am wondering if we can find the transfer of those funds to the Bureau to your liking, and in what time frame.

General SCOTT. Mr. Fazio, I have not looked at the issue before. We do have the money. We could transfer. I would have to look—we just have to analyze that to see the mechanism, if it were possible, and we would do that.

Mr. FAZIO. I wanted to urge you to look at this and move quickly. We are in a position where we could operate these pumps at only about 65 percent of their capacity. We are idling an awful lot of very valuable farmland in counties that I represent that have unemployment rates in good times of 15, 20 percent.

So we really do want to try, particularly in this new world rice market we are in, to make those facilities work to the level they were designed for and at the same time deal with the fisheries issue.

General SCOTT. We will do all we can.

Mr. FAZIO. I would appreciate if you would attend to that one. It is crucial.

General SCOTT. Absolutely.

LOS ANGELES COUNTY DRAINAGE AREA

Mr. FAZIO. Los Angeles County Drainage Area, can you explain to the Committee what the holdup is in the processing of the record of decision on the LA county drainage area project?

General SCOTT. Mr. Fazio——

Mr. FAZIO. Obviously this is for one of my colleagues, but it is one of our continuing issues here.

General SCOTT. Mr. Fazio, I am unaware of any holdup in the processing at OMB of the Record of Decision. We currently have—we have just submitted the PCA to headquarters and we are hopeful that we can get to a signing of the PCA in April, early April of this year.

Mr. FAZIO. The question was brought to my attention by people who feel there has been an 18-month holdup by OMB on the approval of the project. The feasibility report and the EIS were processed up through the Assistant Secretary's office.

I guess you just walk through that empty office over there when you do that. I have to mention again, a third time, before this committee, without anybody in the Assistant Secretary's office.

But I am sure people can walk through it with paper, right?

General SCOTT. I am not aware of any delay. As you know, we have funds this year in the budget programmed to begin that project. And I am just unaware of any——

Mr. FAZIO. Well, I have some other questions on that for the record.

[The information follows:]

LOS ANGELES COUNTY DRAINAGE AREA PROJECT

Mr. FAZIO. General Scott, can you explain to the Committee what the hold up is in the processing of the Record of Decision on the Los Angeles County Drainage Area project. It is my understanding that the Chief's Report on the LACDA project was transmitted to Congress on June 30, 1992. The feasibility report and the EIS were also processed up through the Assistant Secretary's office and to OMB at the same time. But for the last eighteen months, there has been no action by OMB to approve the project.

What is the current status of the Record of Decision and when do you anticipate OMB approval?

General SCOTT. Sir, it is my understanding that the Record of Decision is currently in Office of the Assistant Secretary of the Army for Civil Works, but no action can be taken until OMB approves the feasibility report. In order to meet our scheduled April 1995 PCA execution date OMB would have to approve the feasibility report in March 1995.

Mr. FAZIO. Is it your expectation that OMB approval and the Assistant Secretary's sign-off will come in time to allow construction to begin on the project in July of this year, as currently planned?

General SCOTT. Sir, we are hopeful the necessary approvals will come in time to meet our schedule to award the contract for the Compton Creek feature in mid-July.

Mr. FAZIO. Do you anticipate any delay that would impact your ability to use the $11,367,000 requested in the fiscal year 1996 budget submission to continue construction on the project?

General SCOTT. No, sir. We expect to use all of the requested funds to complete construction on Compton Creek and to initiate construction of the parapet walls on the lower Los Angeles and Rio Hondo Rivers.

CORPS' OLDEST FLOOD CONTROL PROJECTS

Mr. FAZIO. I just wanted to conclude by saying that I heard you say yesterday as we were discussing this criteria that we face, that the two oldest flood control projects in the Nation were Mississippi River and Tributaries and the Sacramento River.

Could you give the committee the benefit of your historic overview, your recollection of the beginning of flood fighting in the Army's history?

General SCOTT. In the Corps' mission, yes, sir. The first flood control act was the Flood Control Act of 1917, and in that act it identified for the Corps to flood manage or protect from flooding the two river systems, one was the Mississippi River system, and the other, as you know, is the Sacramento River system, sir.

Mr. FAZIO. And so if we decide to protect one and not the other, we sort of are going back, I guess, on historic commitments, east-west, north-south, and all the rest. I know if Mr. Whitten were still a Member of the Committee he would join me in saying, we got into this together and we ought to stay in it together. I am sure he would, because I would ask him to. And he probably would just on the basis of his understanding of how the country has always worked together in funding these programs and supporting them for the benefit of the entire country and all its regions.

ALTERNATIVE FLOOD CONTROL CRITERIA

I simply would want to close by saying I thank you for the job you have done on these projects and a number of others that I didn't need to identify because we are proceeding without any hangup at all. Not that we are hung up on all of these, but there are problems that we need to attend to. But it would be tragic if the historic role that the Corps has played in my State were—and I am sure this would apply to many other States, some represented on this committee—were simply terminated as a way of getting an $870 million cut in the budget.

Having said that, this committee still has the ball and it still has to come up with savings. I would be interested in the Corps once more submitting some other approaches we might take that are more equitable and fair and balanced in how we find that money.

Thank you all very much.

General SCOTT. Thank you, sir.

Mr. MYERS. Thank you, Vic.

Mr. FAZIO. Thank you, Mr. Chairman.

Mr. MYERS. Are you finished? Do you want to come back?

Mr. FAZIO. I have to run and I will be going elsewhere.

Mr. MYERS. You won't be coming back for questions?

Mr. FAZIO. No, sir. I will submit them.

[The information follows:]

WEST SACRAMENTO LEVEE RECONSTRUCTION

Mr. FAZIO. What is the Corps' capability in FY '96 for this project?

General SCOTT. Sir, the President's budget of $7 million provides adequate funding for continuation of construction.

Mr. FAZIO. What is the optimum funding schedule—in terms of completing the project in the most timely manner possible—for the West Sacramento project?

General SCOTT. The most optimum funding schedule includes $7 million in FY 96, $5.5 million in FY 97 and $353 thousand in FY 98 to complete construction by January 1998.

Mr. FAZIO. Is there anything we need to do to help expedite this work?

General SCOTT. Sir, I am happy to report that we are on schedule to complete this project.

NO. CALIFORNIA STREAMS, WINTERS & VICINITY

Mr. FAZIO. What is the Corps' capacity for this project in FY 1996?

General SCOTT. Sir, the President's budget of $200,000 provides adequate funding for continuation of feasibility studies.

HAMILTON CITY LEVEES

Mr. FAZIO. Will you please designate a point of contact for my local elected officials who are interested in pursuing this matter?

General SCOTT. Yes sir, Mr. Walter Yep is my Chief of the Planning Division in the Sacramento District and would be the point of contact for local officials to initiate discussions concerning this matter.

GLEN-COLUSA IRRIGATION DISTRICT—RIFFLE RESTORATION

Mr. FAZIO. How quickly can you transfer these funds to the Bureau of Reclamation? Please report back to me when this has been accomplished.

General SCOTT. Sir, the transfer of funds can be accomplished very quickly upon approval to do so. I will keep you informed on the status of your request to transfer the funds.

MARYSVILLE/YUBA CITY LEVEE RECONSTRUCTION, CA

Mr. FAZIO. What is your capacity in FY 1996 for this project?

General SCOTT. The President's budget includes adequate funds of $6 million for continued design and construction efforts.

Mr. FAZIO. What is the potential obstacles, if any, might you encounter as you continue?

General SCOTT. Sir, we currently do not anticipate any obstacles.

OCEANSIDE HARBOR SAND BYPASS

Mr. FAZIO. General Scott, as you know, the Committee has been very supportive of the Oceanside Sand Bypass project, and I am concerned that there are no funds for the operation and maintenance of the facility requested by the Corps in the fiscal year 1996 budget request. What is the Corps' capability for the Sand Bypass in fiscal year 1996?

General SCOTT. We have no additional capability for operation and maintenance of the project in fiscal year 1996. Upon completion of Phase III, we expect to be able to operate and maintain the system for an appropriate period of time using funds which are currently available.

SPD ACCOMPLISHMENTS

Mr. MYERS. I wanted to join in in Mr. Fazio's response to your rate, your accomplishment rate last year of 86 percent, is that right?

General SCOTT. About 85 percent.

Mr. MYERS. Is it contagious? Do you think you can teach that? It has been consistent, just about every division has had a large carryover. I will give Mr. Riggs a moment to catch his breath. Are you ready?

SOUTH PACIFIC DIVISION LEADERSHIP

Mr. RIGGS. Ready as I am ever going to be, Mr. Chairman. Thank you, I appreciate it, Mr. Chairman.

Good afternoon, again, gentlemen and General Scott. It is nice to see you. We had a very nice visit yesterday in my office.

So I think we had the opportunity, Mr. Chairman, to discuss in some depth and with real candor some of my concerns and some of the issues in my district that obviously fall under the jurisdiction of the South Pacific Division of the Corps in General Scott's command.

I want to first of all recognize and commend him for the job he has been doing in the brief period of time that he has been in that position. Since assuming command of the South Pacific Division, we have noticed a remarkably improved responsiveness, and I am sure that that reflects, as it would with any organization, the attitude and thinking of the top leadership, because that is a truly top-down phenomenon.

NORTHERN CALIFORNIA FLOODS

I want to again recognize and thank the General personally for his responsiveness, and I also want to commend the San Francisco and Sacramento district offices for their tremendous response during the recent severe flooding in California. Knock on wood, we have at least temporarily solved our drought problems.

But at the same time, thanks largely to the Corps, we have controlled the potential damage from the flooding, although I know Mr. Fazio has already been on record as saying that he worries some about the potential flood problems when the snowpack melts and we see the runoff from the mountains. So I will go on record as seconding those concerns.

And I promise you I will never again facetiously tell my fishermen in the various ports on the north coast that the real solution to our problems is a hundred-year flood, because I think within a few days of my making that comment to one particular group, the skies opened and the rain began to fall. So never again.

CRESCENT CITY HARBOR

I also want to thank the General for proposing the design project at Crescent City Harbor in my district. This is really the far northern spot, almost the northernmost point in my congressional district, very near the Oregon border. As has been noted in the General's testimony, that harbor at Crescent City, which is also home to a Coast Guard station for search and rescue purposes, provides a home port and sanctuary for commercial—it says in your testimony, General, commercial, but I should also point out it is a commercial and recreational fishing fleet consisting of 200 vessels.

So we are excited about that particular project. And again, we commend you, sir, for making that or identifying that as a priority under your design program.

CONSTITUENT CONCERNS

General I also have a series of questions very similar to the issues I raised informally in our discussion yesterday in my office that I would like to submit for the record. I am told that Committee staff already has a list of these particular questions, nine in all, wherein I am asking for a formal response from you, sir, and your office regarding a number and variety of constituent concerns.

General SCOTT. I would be delighted to answer those for the record, yes, sir.

Mr. RIGGS. I appreciate that, sir.

[The information follows:]

QUESTIONS FOR THE RECORD FROM MR. RIGGS

ADMINISTRATION POLICY

Mr. RIGGS. Please submit for the record a list of all active and proposed projects in the First Congressional District of California, how much funding has been requested for FY 1996, and how each has been or would be affected by the President's proposed policy of funding only projects of "national significance."

General SCOTT. Sir, we would be pleased to submit that information for the record.

[The Information Follows:]

CIVIL WORKS PROJECTS IN THE FIRST CONGRESSIONAL DISTRICT OF CALIFORNIA THAT WOULD NOT BE IMPACTED BY PROPOSED POLICY

Project Title	Phase	FY 96 Budget Amount
Crescent City Harbor, CA	Feasibility	$ 250,000
Crescent City Harbor, CA	PED	$ 50,000
Crescent City Harbor, CA	O&M	$ 0
Humboldt Harbor & Bay, CA (Deepening)	PED	$ 410,000
Humboldt Harbor & Bay, CA	O&M	$4,670,000
Noyo River & Harbor, CA (Breakwater)	PED	$ 559,000
Noyo River & Harbor, CA (Navigation)	O&M	$ 0
San Pablo Bay & Mare Island Strait, CA	O&M	$1,080,000

CIVIL WORKS PROJECTS IN THE FIRST CONGRESSIONAL DISTRICT OF CALIFORNIA THAT WOULD BE IMPACTED BY PROPOSED POLICY

Project Title	Phase	FY1996 REQUEST TO OMB	FY1996 BUDGET AMOUNT	Remarks
Napa River Salt Marsh Restoration, CA	RECON	$ 200,000	$ 0	Proposed new study
Russian River Environmental Restoration, CA	RECON	$ 100,000	$ 0	Proposed new study
Dry Creek (Warm Springs) Lake & Channel Proj, CA	O&M	$3,172,000	$3,172,000	In FY 98 transfer to non-Federal Interests
Coyote Valley Dam, Lake Mendocino, CA	O&M	$2,410,000	$2,410,000	In FY 98 transfer to non-Federal interests
Napa River, CA (Navigation)	O&M	$ 0	$ 0	In FY 98 transfer to non-Federal interests
Napa River, CA (Flood Control)	PED	$ 787,000	$ 787,000	Complete PED, will not begin construction

SANTA ROSA WASTEWATER DISPOSAL

Mr. RIGGS. In a January 23, 1995, editorial, the Santa Rosa Press Democrat suggested that the Corps of Engineers wants Santa Rosa to spend $1.5 million to study the feasibility of building a pipe to carry treated sewer water to the Pacific Ocean. I have been told that this proposal has been dropped. Is this correct? Please provide background regarding the proposal, including why and by whom it was suggested.

General SCOTT. Sir, the City of Santa Rosa applied for a permit in 1994 for construction of a wastewater project. Initial public workshops held by the City identified ocean discharge as a possible solution. The City decided not to carry this alternative forward because of the additional costs estimated to be $1.5 million and 18 months needed to study it. After further development of the project purpose, including wastewater reuse, the Corps concurred with the City that the ocean alternative should be eliminated since it provided no reuse opportunities.

PACIFIC SHORES WATER DISTRICT

Mr. RIGGS. In a February 5, 1995, letter, the President of the Pacific Shores Water District complained to the Sacramento District of the Corps of Engineers regarding damage supposedly caused by the Corps. A copy is enclosed. Please address for the record the issues raised.

General SCOTT. Sir, the Pacific Shores Subdivision, near Lake Earl, was created in 1964 but is undeveloped. Rains cause the lake to rise periodically until a sandbar is topped and breached, allowing it to drain to the Ocean. The issue is the level at which the lake should be managed.

The Corps has been regulating local work required to artificially breach the sandbar since 1976. All the resource agencies have recommended that an EIS/EIR be prepared on the breaching. Since the expiration of a ten year permit in 1986, permits have been issued on a year by year basis to Del Norte County, based on various emergencies.

In 1991 the Corps made a determination that no further permits should be issued without an EIS/EIR. The problem is that no one has the money to do the appropriate environmental studies. The Corps has been working with Del Norte County and resource agencies to find a way to get the studies done. The County and the California Department of Fish and Game have jointly applied for a two year interim permit for breaching the lake, to allow time for the studies to be completed. Most recently, and notwithstanding the Corps 1991 determination, Del Norte County was issued a permit to breach the lake on January 11, 1995, based on a public health emergency.

[The Letter Follows:]

COPY

PACIFIC SHORES WATER DISTRICT
Partners With The Environment

February 5, 1995

Mr. James L. LaFrenaye
Natural Disaster Program Manager
U.S. Army Corps of Engineers
Sacramento District
Emergency Management Division
1325 J Street
Sacramento, CA 95814-2922

RE: Flood Damage Roads in Pacific Shores Subdivision, Del Norte County, California

Dear Mr. LaFrenaye;

The Board of Directors of the Pacific Shores Water District wish to thank you on behalf of the property owners, who have invested their time, money, and dreams in the ownership of a homesite in the Pacific Shores subdivision, for visiting the Subdivision to see for yourself the damage that has been done to the road system due to flooding.

Until just a few years ago, the roads beds in the Subdivision were in good condition, and the macadam need very little maintenance to remain in serviceable condition.

The County Flood Control managed the water levels of Lakes Earl and Tolowa at a level (4 foot medium sea level) that afforded a storm retention basin, and protected the County roads near the lakes, homesites, farmers pasture lands, septic systems, the Subdivision's and the State's Park and Recreation property, the Tolowa Nation's Ceremonial burial Grounds, the local drinking water aquifer from contamination from bacterial contaminates and toxins from adjacent dump sites, and kept the mosquito population in check as a protective measure against vector diseases.

The regular opening of the sand bar at the mouth of Lake Tolowa also allowed anadromous fish to spawn, riparian vegetation to flourish, sago pondweed growth for the wintering fowl, protected several endangered, and threatened species, and provided for a stable environment that enhanced production of a full food chain for vertebrate and invertebrates indigenous to the Northcoast.

3051 Tigertail Drive, Los Alamitos, CA 90720 Phone: 310-596-0726 • Fax: 310-596-1507
Dwayne B. Smith, President • Gerald W. Shaver, Vice President/Secretary • Bob Bankard, Treasurer

Unfortunately, a few years ago, there came about a great deal of pressure upon the Army Corps of Engineers in San Francisco to disallow the County to continue their flood control management of the lakes at their normal and historical 4 foot msl by the simple expedient of not granting a permit to breach the sand bar at the mouth of Lake Tolowa.

Some environmental regulators and environmental activist did not want to see the Subdivision developed and thought the Subdivision should be forced into the adjacent wildlife area as set out in a master planned coastal park and wildlife area in 1971.

Apparently the San Francisco District bought into this desire of the environmental activist to squash the development of the Subdivision by deliberately flooding the Subdivision each year so as to make building of the water and sewer facilities uneconomical. This scheme would effectively kill off any chance of the Subdivision ever getting developed.

The road system in the Subdivision has been ruined by flooding. There is no doubt about this. The damage to the road beds and surface over the last several years was, and continues to be, caused by action of the U.S. Army Corps of Engineers by not allowing the County and local citizens to continue a flood control management regimen that had been going on for over a hundred years.

So, in representing the couple thousand owners of the Pacific Shores Subdivision, we ask that in all fairness, you correct the injustice done to the taxpayers of the County of Del Norte, and fund the needed repairs to the roads within the Subdivision.

I have enclosed pictures that depict the typical destruction of the roads that have been caused by the Army's actions.

If you have any reason to disbelieve what has been presented to you in this letter, please contact the San Francisco District or Division Headquarters in San Francisco, for verification of their permitting practices over the last several years.

Please respond to this communication so that we may know the request of assistance has been acknowledged and is being processed.

Respectfully Yours,

Dwayne B. Smith, President
Pacific Shores Water District
cc: U.S. Senator Barbara Boxer
U. S. Representative Frank Riggs
U.S. Representative Ed Royce

NAVIGATION BUOYS

Mr. RIGGS. Does the Corps maintain navigational buoys along the California coast? Please provide a list, as well as information regarding whether these are proposed for removal, and the reasons supporting removal.

General SCOTT. Sir, the Corps does not maintain navigation buoys along the California coast. The U. S. Coast Guard is responsible for aids to navigation. I do not have any specific information concerning the status of any navigation buoys along the California coast.

KLAMATH GLEN LEVEE

Mr. RIGGS. What is the status of the Klamath Glen levee reconstruction (necessary due to defects in the original Corps design/construction)? A memo is attached.

General SCOTT. Sir, we have completed an initial appraisal report of erosion damage to the levee, with a finding that a deficient levee design did cause the erosion in April 1994. That report was approved by our headquarters in August 1994. Reconstruction of the levee will cost about $1.0 million and will require cost sharing with the local sponsor as specified in the Water Resource Development Act of 1986 for flood control projects. We have informed Del Norte County, the local sponsor, that they will have to provide their share of the cost of the levee reconstruction and have not yet received a response. Pending a response from the local sponsor indicating willingness and ability to cost share, it is not practical to establish a definite schedule for design and construction. No funds are included in the FY 1996 budget for this purpose.

[The Memorandum Follows:]

COUNTY OF DEL NORTE
COMMUNITY DEVELOPMENT DEPARTMENT
700 Fifth Street
CRESCENT CITY, CALIFORNIA 95531

PLANNING
(707) 464-7254

ENGINEERING & SURVEYING
(707) 464-7229

BUILDING INSPECTION
(707) 464-7253

November 2, 1994

Del Norte County Board of Supervisors
583 G Street, Suite 1
Crescent City, California 95531

SUBJECT: REPAIR OF KLAMATH GLEN LEVEE AT TERWER CREEK

Dear Board Members:

RECOMMENDATIONS: Informational item - no action necessary.

SUMMARY: This office was recently informed that the United States Army Corps of Engineers San Francisco District will be performing the subject work in the summer of 1995. Construction materials will be stockpiled at the site in the meantime to expedite emergency repairs should they be needed.

As the Board is aware, this work is the result of many years of meetings, negotiations and cooperative efforts among the County, the Corps and Congress.

Originally, the Corps described the repair as maintenance work and the County's sole responsibility. The County's position has always been that the levee had historically been properly maintained and the progressive erosion failure was a result of design error by the Corps and that the Corps should be solely responsible for fixing the problem and bearing the cost of the fix.

The Corps has now determined that the original design was in error and is willing to fund the repair of the levee.

FINANCING: Corps of Engineers to provide financing.

HUMBOLDT BAY AND HARBOR

Mr. RIGGS. I have received letters from John O'Donnell and Stanwood A. Murphy, Jr., relating to the deepening of Humboldt Bay and Harbor. Please address for the record the concerns they raise in the attached correspondence.

General SCOTT. Sir, Mr. O'Donnell expressed concern on prior delays in designation of a Section 102 ocean disposal site for Humboldt Harbor, and that further delays might jeopardize the possibility of authorization of the deepening project this year. I am pleased to be able to report to you that the Environmental Protection Agency has informed us that they will issue a preliminary rule for designation of the 102 site by March 31, 1995. This action will permit the Corps to maintain its schedule of April 1995 for completion of our feasibility phase.

Mr. O'Donnell also questioned whether there were environmental reasons that have caused delay of the Section 102 site designation. I am not aware of any issues being raised by the environmental agencies that would cause delay of the 102 site designation.

Mr. Murphy expressed concern about the exclusion of the Fields Landing Channel feature of the existing project from the proposed project modification. As the only active dock in the Fields Landing Channel, Mr. Murphy would be the single beneficiary for the deepening of that channel. Corps policy does not allow a project feature to proceed to design and construction if only a single user benefits from that element. Such is the case with the Fields Landing Channel.

Mr. Murphy's second comment about South Bay docks in Table 4, Humboldt Harbor Tonnage, is based on the misunderstanding that the word, docks, includes only active docks in that region. Docks, refers to all docks in the South Bay, active or inactive.

The last concern in Mr. Murphy's letter is the exclusion of South Bay tonnage for commodities in the deepening project. Since the Fields Landing Channel is not recommended for modification, because of the single active user status of the channel, the tonnage for commodities at Mr. Murphy's dock is not included in evaluation of the features proposed for modification.

[The Letters Follow:]

John R. O'Donnell
WASHINGTON REPRESENTATIVE
1620 I STREET, N.W., SUITE 900
WASHINGTON, D.C. 20006

TELEPHONE (202) 429-0168 FAX (202) 293-8109

February 22, 1995

To: Mark Davis

From: John O'Donnell

Re: Corps Hearings - The Humboldt Bay and Harbor Deepening Project

Background
The Corps will complete the feasibility study for the deepening project in April. The environmental impact statement (EIS) for the construction project, which is part of the feasibility study, calls for the dredge materials to be disposed in an offshore open ocean disposal site. The Environmental Protection Agency (EPA) must issue a site designation permit for the disposal of the dredge material. As I understand the process, there are two types of site designations for disposing of the dredged material, Section 102 and Section 103. Humboldt and the Corps have requested a 102 designation which is a permanent site designation.

Problem
EPA was supposed to issue the 102 designation in November 1993. Later the agency said it would make the designation by November 1994. It has not happened. This causes a problem for the Harbor District because the construction project could be delayed if it does not make it into WRDA 95. The Corps cannot support inclusion of the Humboldt Bay and Harbor Deepening Project in WRDA if the 102 designation is not made because the EIS for the project in the feasibility study identifies a 102 disposal site. The Corps, EPA and the Harbor District all agreed previously to the 102 site designation. EPA has to make that designation before the project can be included in WRDA. It might be possible to obtain an authorization for the project in WRDA contingent upon the 102 designation being made before final approval of a bill. EPA claims that it will make the 102 designation by July.

I have called EPA's State and Local Government officials to determine how long before a designation is made. I believe that the Region X office plays a significant role in making the designation.

Questions for the Corps in Energy and Water Hearing
How will EPA's delay in issuing a 102 site designation for the Humboldt Bay and Harbor Deepening Project impact its authorization in the Water Resources Development Act (WRDA)? Are there environmental reasons that have caused delay of the 102 designation?

Congressman Frank Riggs
Washington D.C.

Dear Congressman Riggs ,
As I told you Saturday night , I would drop you a line concerning the Corps of Engineers proposed deepening of Humboldt Bay . In reviewing the Appendices and the Fiesibility Report , I found a few interesting facts. . First I found that the reason why we were not included in the original study was because we were considered to be the only deep water dock on the Fields Landing Channel . The Harber District Dock formerly the Kramer Dock was not even considered a dock . This then placed us in a special category " privately owned and operated for profit." Its hell to be a capitalist ! This means that we cannot be considered for any Corps projects because we might financially gain from the improvement of the Fields Landing Channel . If you consider the fact that the only reason that this facility was built here was because there was already a channel here that the Corps built here in the 1930's , it sounds kind of foolish to penalise us for using the channel for what it was intended , commerce .

My second fact that I want you to know about , comes from the Appendices . Table 4 "Humboldt Harbor Tonnage" in the figures that are shown here , are also included all of tonnage from Humboldt Bay Forest Products . On the following page is Table 5 Humboldt Harbor Tonnage Projected Project-Related Cargo . A notation at the bottom of the table points out that Docks located in the South bay were not included . The key word there is DOCKS . The Corps admits right there that there was more than one dock in the South Bay (Fields Landing Channel). A third and final fact here is the last sentence before the table . (Excluded are tonnages for commodities not impacted by the project.) Congressman , how can the Corps state that a commodity is not impacted if the dock from which it is shipped is on a channel that is not going to be improved (ie. deepened) to keep up with the rest of the industry in the harbor . It looks to me like a pure case of discrimination in the simplest form .
I will quit here for now and look foreward to hearing from you in the near future .

Your Constituent
Stanwood A Murphy Jr

RUSSIAN RIVER

Mr. RIGGS. I have received a letter from Mr. Ralph V. Lock, Vice President of Syar Industries, Inc., a copy of which is attached. As you will note, Syar Industries would like to meet with the Corps to discuss a Russian River maintenance plan that would cost the taxpayer nothing. Please comment for the record on the Syar proposal. I would also appreciate your asking appropriate Corps of Engineers staff to meet with Syar representatives.

General SCOTT. Sir, the Corps will meet with Syar Industries, Inc. to discuss their concept of maintaining the Russian River. We understand that their proposal concerns methods of gravel mining in river beds. Our only involvement will be in a regulatory capacity because of our Section 404 jurisdiction. I should note that the Russian River was designated as a wild and scenic river in 1968, and as such, it may be difficult to obtain a consensus on new gravel mining proposals.

[The Letter Follows:]

SYAR INDUSTRIES, INC.

February 22, 1995

Honorable Frank Riggs
Attn: Mark Davis
1714 Longworth HOB
Washington, DC 20515

Re: Russian River Middle Reach and Alexander Valley concerns

Dear Congressman Riggs:

We wish to bring to you our concerns over the hydraulic capacity of the Russian River between Healdsburg and the Wohler constriction and those areas of the Alexander Valley which sustained flooding damage during the 1994-1995 storms. Without belaboring this correspondence with great detail, the primary problem in the Middle Reach and the Alexander Valley is the ability of the channel to carry water flows. The channel has been agrading over the last thirteen years. There has been very little gravel bar skimming during this period. Between the gravel build-up (aggragation) and the out-of-control riparian growth patterns the river's channel flow capacity has been reduced and there has been substantial disruption of the levee system in place in the Middle Reach of the Russian River.

Our engineering department has secured cross-sectional information from the Sonoma County Planning Department and computed this cross-sectional information to confirm the gravel build-up mentioned above. There have been discussions of the stream-way concept being constructed in the Middle Reach of the Russian River. This concept will only lead to the same inherent problems the river has now and cost the taxpayer millions of dollars to construct.

We would like the opportunity to sit down with your staff, the Corps of Engineers and a non-biased Scientific community of hydrologists to outline a plan of river channel maintenance that will give the channel enough capacity to handle the average historical events that have taken place in these sections of the Russian River. This maintenance plan would cost the taxpayer nothing and would be structured so as to protect any possible degregation of the channel while allowing riparian growth patterns to sustain the integrity of the environment.

As previously mentioned in discussions with the Russian River Property Owners Association, river maintenance is a key ingredient to control flooding events.

In hopes we may be of service to you and your staff, we look forward to an early meeting on the above issues.

Thanking you, I remain...

Sincerely,

Ralph V. Locke
Vice President, Marketing

RVL:cab

SONOMA COUNTY AIRPORT

Mr. RIGGS. Attached is a letter written to me in December of 1994 by Sonoma County Supervisor Nick Esposti, regarding soil testing to evaluate contamination at Sonoma County Airport. Please address Supervisor Esposti's concerns for the record.

General SCOTT. Sir, Mr. Esposti's concern is with soil testing the County wishes to complete at the Sonoma County Airport which was formerly the Santa Rosa Army Airfield. Because of it's former Army use, there is the possibility of encountering Chemical Weapons Material. There are risk and safety issues involved, and even though we cannot restrict the County from completing their soil testing, we recommend they not take any action before we complete our examination of the site this summer.

[The Letter Follows:]

COUNTY OF SONOMA
BOARD OF SUPERVISORS
575 ADMINISTRATION DR., RM. 100A
SANTA ROSA, CALIFORNIA 95403
(707) 527-2241

NICK ESPOSTI
SUPERVISOR FOURTH DISTRICT

December 13, 1994

Congressman Frank Riggs
P.O. Box 590
Windsor, CA 95492

Subject: Evaluation of Contamination at Sonoma County Airport

Congressman Riggs,

I am writing to request that you use whatever contacts you may have to persuade the Army Corps of Engineers to consent to limited soil testing that we want to perform.

On October 19, 1994, the Sonoma County Board of Supervisors ("Board") directed staff to determine the extent of contamination associated with the Major Aviation Corporation leasehold site ("Site") at the Sonoma County Airport so that the Board could be in a position to negotiate the terms of a new lease for the site.

On November 16, 1994, the Board approved a contract with Herzog Associates to evaluate the extent of the contamination associated with the site.

The site is located within the Ordnance Road area where the U.S. Army buried former war materials (e.g., gas ampules and ammunition.) In a letter to the County dated June 9, 1992, the Army Corps of Engineers strongly recommended that the County delay any excavation at the North County Detention Facility ("NCDF") located on Ordnance Road until an Army Corps' investigation was completed.

Because of the Army Corps' past direction to the County not to excavate around the Ordnance Road area, staff notified the Army Corps of the County's intention to have Herzog evaluate the extent of contamination associated with the site which involved taking soil samples. The Army Corps was asked to respond to the County by November 29, 1993 if they had any concerns about the proposed work to be performed by Herzog.

On December 1, 1993, staff received a telephone call and FAX from the Army Corps office in Sacramento which stated that the site had a Risk Assessment Code (RAC) of 5, defined as minimal risk, and that precautions should be taken.

On December 15, 1993, Herzog was given written notice to proceed with work.

On December 27, 1993, staff received a telephone call and FAX from Natalie Sterling of the Army Corps stating that a mistake had been made. The Santa Rosa Airfield Ordnance Road area, which impacts a North County Detention Facility ("NCDF") project, was not a RAC 5 site but, in fact, a RAC 2 site, which implies a significantly greater risk. Also, that the Army Corps was in the process of contracting with a consultant to do a field reconnaissance of the site and prepare a Site Safety Plan which should be implemented for all subsurface work performed at the Ordnance Road site. The Army Corps advised staff that the completed Safety Plan would not be available for approximately three months (March 1994) and asked staff not to proceed with the work until the Site Safety Plan is available. Ms. Sterling said they would follow-up in writing. Staff subsequently put Herzog's work on hold.

On January 21, 1994, staff received, by FAX, the follow-up. The letter discussed the work the Army Corps has planned at the NCDF, although they incorrectly interpreted our work to be related to the NCDF. The NCDF project involves excavation while our project only involves soil testing. Based on this letter, the Army Corps is recommending that all work be delayed until theirs is completed.

On February 16, 1994, Public Works staff, along with the Airport, Architect, and Detention Facility staffs, met with Army Corps of Engineers staff -- Roland Belew, Natalie Sterling and Sergeant Mike Robinson -- and their consultants to discuss the NCDF project being undertaken by the Army Corps and to tour the site. The study was to have been completed in May 1994. To the best of our knowledge the study has yet to be completed. A result of the completion of the study is expected to be that Army Corps personnel and equipment will be made available for support during County activities involving excavation in the Ordnance Road area.

On November 17, 1994, we were advised that a target date for this support has been recently pushed back from March 1995 to July 1995, at the earliest. This date cannot be confirmed until issues related to disposal of any ordnance unearthed are resolved.

We are not asking to undertake a huge excavation project. All we need is for them to review the scope of work that Herzog plans to undertake and give us their consent to do the work or advise us as to what additional safety measures should be undertaken. They seem to be trying to tie the issue of where they are going to dispose of their materials when they are finally in a position to clean up their site with our request that they simply review Herzog's limited scope of work to take soil borings. These are two separate issues, and while the County will welcome future support from the Corps during construction activities, we would like to move forward with lease negotiations with Western Building Systems. The Army Corps should not let their problems related to disposal of ordnance delay them from giving us approval to proceed with our project. We are losing money every day that the Army delays since the current leases are at below market rents and Western Building Systems is willing to pay market rent for renegotiated terms.

Thank you for your assistance.

Very Truly yours,

Nick Esposti

NICK ESPOSTI
Fourth District Supervisor

NE:ga:7318

SANTA ROSA WETLANDS

Mr. RIGGS. Please comment for the record on the "wetlands" concern raised by Mr. Paul Pennington in his letter to me of December 9, 1994, a copy of which is attached.

General SCOTT. The "wetlands" concern expressed by Mr. Pennington apparently relates to actions the Corps has taken over the last several years to ensure adequate evaluation of potential impacts to vernal pools in the Santa Rosa plain. Our actions reflected expressed concerns of State and Federal resource agencies as several species associated with vernal pools, including those in the Santa Rosa area, were placed on the Endangered Species list.

Mr. Pennington is correct that Nationwide Permit Number 26 would otherwise have permitted minor actions affecting wetlands of less than an acre. However, once the Endangered Species issue was raised, it was necessary for us to constrain the applicability of the nationwide permit to ensure that actions taken under that permit would not harm endangered species. Consequently we now require that an individual evaluation be performed before a vernal pool could be adversely impacted by fill - this requirement gives us the opportunity to ensure that the specific pool, or pools, in question would not be endangered species habitat and to identify appropriate mitigation measures where these measures might be required.

Our San Francisco District will arrange a meeting to review and discuss the determinations and significance of vernal pools as well as permit processing procedures in cooperation with other Federal agencies and your constituents. As you are aware, we are preparing a Special Area Management Plan for Vernal Pools to address the local concerns involved in the permit process for development in the Santa Rosa Plain. The draft plan will be released to the public in March 1995.

The goals of the Special Area Management Plan for Vernal Pools include laying out a ranking system for the vernal pools; preserving the most valuable; allowing fill in low value vernal pools with minimal mitigation and expedited permit processing; standardizing mitigation measures for filling low-value vernal pools; proposing site(s) for mitigation banks; and streamlining and integrating Federal and local regulatory processes.

[The Letter Follows:]

OODRICH & PENNINGTON, INC.
Real Estate Loans and Investments

December 9, 1994

Congressman Frank Riggs
P.O. Box 590
Windsor, California 95492

Dear Frank:

Congratulations on winning the election!

Per our conversation at the Charlton Heston event at Henry Trione's house, your help is urgently needed in dealing with the so called "wetlands" issue in Santa Rosa. I realize that the particular property we discussed is located in Congresswoman Woolsey's district, however your entire district is affected by this "stupid" interpretation of the wetlands issue.

Until recently, in the U.S., if a citizen owned property with less than one acre of no quality or low quality "wetlands", a permit would be issued allowing the property to be developed, farmed, whatever. Then, about six months ago the Army Corp of Engineers decided, for the Santa Rosa area only that, because there were numerous no or low quality "wetlands" properties, they *would not* allow permits to be issued in Santa Rosa as they are in the rest of the U.S. for these properties.

Maybe this would be an effort on your part to work with the Democrats to get some positive action out of Washington?

Please have one of your staff members call me to discuss this issue and the action that can be taken.

Best regards,

Paul E. Pennington

Paul E. Pennington

CONTRACT WITH AMERICA

Mr. RIGGS. With that, Mr. Chairman, I am unfortunately going to have to excuse myself. I am in day two of a markup session downstairs in the Opportunities Committee. We are marking up the provisions in the welfare reform bill as called for under the Contract With America, H.R. 4, the Personal Responsibility Act. And we have had some thin votes down there during the markup, and I know my presence and my vote is needed.

Mr. MYERS. We may have some here, too, you can't tell.

Mr. RIGGS. I am on my pager if the need arises.

Again, I want to thank you, all three gentlemen, for your courteousness and your attentiveness, and I just pledge to you that I look forward to working with you over the course of the next two years.

General SCOTT. Thank you very much, sir.

NEW CRITERIA FOR CORPS PARTICIPATION

Mr. MYERS. Thank you, Frank, for your comments here.

The discussion I am sure has been involved here about what the impact will be of the proposed changes the administration has made, so I will not go into that, how that has affected you. Obviously it is going to affect your division as well as Alaska and the Pacific Ocean more than some others. But it is going to present some real problems. I am sure you have been studying this.

I wonder if the State of California and the local communities realize what may happen if Congress should go along with the administration proposal.

General SCOTT. Mr. Chairman, I would not presuppose what the good citizens of my States would know. It is a matter of public record. There has been much discussion on the proposed new policy. But we look at it and we have seen the effects that it would have on my division, sir.

And Ed is pointing out that obviously there has been more press on this. I have been East for four or five days so I haven't seen them all, but I am aware there tends to be—there is a greater interest. In fact, this morning I saw a USA Today piece, an op-ed editorial on proposed Corps policy on flood control.

CALIFORNIA GOVERNOR

Mr. MYERS. I don't think we have heard from your Governor yet. Pete Wilson usually gets on us very quickly when we are about to do something that damages California, but I think he has other considerations.

ORANGE COUNTY FUNDING

Orange County, you have other projects there besides the Santa Ana River. Will those be impacted by their lack of being able to fulfill their contract? What is the status of some of those?

General SCOTT. The short answer is yes. With the Orange County Flood Control District, as I indicated in my statement, we are proceeding with that very important flood control project.

There are some other projects, Surf Side-Sunset Beach, where we have done important prevention of beach erosion. Orange County has asked us in that particular case for a delay in that project.

There are other projects that Orange County—where Orange County itself is a sponsor. They have asked us to look at and in some cases delay, yes, sir, because of their financial situation.

Mr. MYERS. If they wait too long before the flood they are going to miss the boat, aren't they. Should they come along with this proposal by the administration and approve it.

General SCOTT. It depends actually on the specifics of each project, on where we are, and actually, as with Orange County as a primary sponsor, we obviously want to do what they want to do, and they are aware of the consequences, I believe, should they delay.

Mr. MYERS. They are aware?

General SCOTT. They are aware of the new proposed policy, yes.

Mr. MYERS. San Diego too?

General SCOTT. San Diego further south, yes, sir.

FLOOD DAMAGES TO CORPS CONSTRUCTION SITES

Mr. MYERS. You showed us a picture of the Santa Ana River project. I was wondering about that. During the recent floods were there any damage to construction in progress of a severe nature?

General SCOTT. Mr. Chairman, I think, as you realize, there was no significant damage to that project. There were damages to other—some locally constructed flood control projects, Fullerton Creek. The actual Santa Ana mainstem functioned beautiful. It is not yet complete but there were no significant damages to that particular project.

There is a lot of water coming through. But again, I have had no reports on damages specifically. It depends on what construction stage. And the dam is, as you are aware, a flood detention only dam, so the channel of the river is diverted away from the construction while we are building it, as we do with any dam. So I am unaware of any damage.

Mr. MYERS. It did not break through your diversion?

General SCOTT. It did not.

Mr. MYERS. I worry about the projects we have underway in severe storms.

General SCOTT. In fact, we are doing what I mentioned on the Rillito River. I was in Arizona the day it was flooding. We had 300 meters of fresh concrete slurry on the bank as protection that we put in the day before, and that in fact was affected. So yes, it depends on your construction status.

And as you know, this was a significant rain in many areas, but also it wasn't all over California. Some counties got an incredible amount of rain, and while other counties did not.

So it was a very intense rain, widespread, but not uniform, sir.

TROPICANA AND FLAMINGO WASHES

Mr. MYERS. We visited last year in Nevada the area where they have had some problems of diversion and so forth, snow coming out of the Blue Diamond Mountains. It seemed to me, I don't know why Nevada wants to build out there, when it is a natural floodplain. You showed a picture of it. What is the status?

General SCOTT. I am pleased to report we signed on the 7th of February the project cooperation agreement for the Tropicana and Flamingo Washes project. It is a total project of about $231 million. It is a combination of debris basins, detention basins, and the State is providing interconnecting channels to move the water through there so we can allow—we can protect this most rapidly—Las Vegas is the most rapidly growing city in the U.S.

So that PCA was signed on the 7th of February. We are delighted with that. We are under construction in Clark County. Our local sponsor has been a wonderful local sponsor with that very important project.

RECREATION AT CORPS PROJECTS

Mr. MYERS. How many recreation areas do you operate at Corps projects?

General SCOTT. I will have to answer that specifically for the record. We do not have that many. Mostly Sacramento River and a few other ones.

[The information follows:]

Recreation Facilities

In the South Pacific Division, a total of 24 Corps operated dams have recreation facilities associated with them. An additional 5 recreation areas are associated with other non-dam projects. At eleven of the dams, recreation facilities are Corps operated and maintained. We have turned over operation and maintenance of recreation facilities at the other thirteen dams to various agencies. The facilities operated by other agencies were primarily constructed under our Recreation At Completed Projects program with operation and maintenance being a non-Federal sponsor responsibility.

LOCAL OPERATION OF RECREATION AREAS

Mr. MYERS. Will they ever be turned over to the state or other authorities to operate? You can provide that for the record.

General SCOTT. I will.

[The information follows:]

Transfer of Recreation Facilities

In the past, we have made attempts to turn these facilities over to others to operate. Our Los Angeles District has been successful, primarily in highly urbanized areas, in development of recreation facilities that are operated and maintained by non-Federal interests. In the Central Valley, primarily along the Sierra foothills, we have not met with success due to the limited financial resources of the rural counties in which our lake projects are located.

OPERATIONS AND MAINTENANCE

Mr. MYERS. It seems to me if we are going to do this whole plan, one of the things State and local governments can do is take over the recreational areas. I don't think any of us are going to go out there and visit. It is usually local people.

On the O&M, it is a big item, always is. How much of your O&M is for flood control?

General SCOTT. As I testified, we have about $74.5 million O&M this year. Of that, we have got 20 flood control projects and 24 navigation projects. So it is about, in project size, about 50–50. Dollar cost flood control for 1996, I am seeing about $33,200,000.

LOCAL OPERATIONS AND MAINTENANCE

Mr. MYERS. Is there any consideration given to what responsibility you will have under the new criteria on O&M with these flood control projects that are local?

General SCOTT. As we look into the future on what we are going to do with these projects, those projects that are not of national significance, they obviously will be turned over to the States. Our main flood control projects, when we complete them and turn them over, they are also maintained by the States.

So I haven't done an analysis long term of that particular issue, but to give you a flavor for about how much for this fiscal year and the total number of projects.

Mr. MYERS. I would appreciate it.

[The information follows:]

TRANSFER OF FLOOD CONTROL PROJECTS

The South Pacific Division currently operates and maintains twenty flood control projects as well as three dams constructed by the California Debris Commission for control of hydraulic mining debris. Of that total, seventeen flood control projects and the California Debris Commission dams would eventually be transferred as the waters they control and the areas they protect are located within the same state. Three flood control projects would remain a Federal responsibility for operation and maintenance. They are: Alamo Lake, Arizona; Painted Rock Dam, Arizona; and Martis Creek Lake, Nevada and California, all three of which provide protection to areas outside the state in which they are located.

ADDITIONAL QUESTIONS

Mr. MYERS. I think there will be some other questions some Members will provide for the record. We appreciate your response. Thank you.

This is your first trip before us. We hope you have many more. I hope we will share those for many more. Thank you for your testimony.

[The information follows:]

QUESTIONS FOR THE RECORD FROM MR. MYERS

PENINSULA BEACH

Mr. MYERS. Does the Corps of Engineers have the capability to initiate a Reconnaissance Study for the Peninsula Beach, City of Long Beach Study?

General SCOTT. The Corps has no capability to initiate the Peninsula Beach study because it does not meet the criteria of National Significance.

Mr. MYERS. How much can be used to proceed with this study in FY1996?

General SCOTT. Funds of $300,000 are required to initiate the Reconnaissance Study.

MOUTH OF THE LOS ANGELES RIVER

Mr. MYERS. What work was done this past year to maintain navigation channel at the mouth of the LA River?

General SCOTT. We awarded a dredging contract on February 8, 1995 which is scheduled to be completed on March 20, 1995. Approximately 250,000 cubic yards of material will be removed at a cost of about $1,400,000.

Mr. MYERS. How much is needed to perform advanced maintenance for navigation channel at the mouth of the LA River?

General SCOTT. Sir, the mouth of the Los Angeles River requires dredging so infrequently that advanced maintenance dredging is not worthwhile. Accordingly, we have not developed a cost estimate for that activity.

SANTA PAULA CREEK

Mr. MYERS. There was serious flooding on Santa Paula Creek in January 1993, what damage occurred to the Phase 1 Channel, and what was the cost for repair?

General SCOTT. While no flooding occurred, debris-laden stream flows in January 1993 were destructive to the Phase I Channel, causing some damage to its sidewalls and channel bottom. The cost of the repair was $125,000.

Mr. MYERS: Could you accelerate the GRR and Plans and Specifications to initiate construction in FY 1996 and if so what work can be accomplished?

General SCOTT. While we cannot advance the scheduled July 1995 completion of the GRR we may be able to accelerate the amendment to the Section 221 Agreement and the plans and specifications sufficiently to allow a contract award to remove and replace the Phase I Channel in July 1996, if we are so directed and funds are provided for that purpose.

Mr. MYERS. What is the Corps capability to initiate construction at Santa Paula Creek in FY 1996? Answer: $300,000 to be used to dismantle the existing inadequate structure.

General SCOTT. We have no approved capability beyond the $300,000 requested in the budget to complete plans and specifications.

RANCHO PALOS VERDES

Mr. MYERS. What does the Corps estimate the cost to continue the feasibility study?

General SCOTT. It would cost $320,000 to continue the Rancho Palos Verdes feasibility study.

NORTHERN LOS ANGELES COUNTY (PALMDALE) FLOOD CONTROL

Mr. MYERS. What is the Corps capability to initiate a feasibility study on this serious flood control project?

General SCOTT. The Corps has no capability to initiate the Northern Los Angeles County Palmdale flood control study because it does not meet the criteria of National Significance.

MARINA DEL REY AND BALLONA CREEK

Mr. MYERS. Do the recreational vessels that utilize the Marina del Rey and Ballona Creek, California, project require the authorized project depths?

General SCOTT. Yes sir, the authorized depths are the minimum required to safely accommodate recreational vessels using the harbor.

Mr. MYERS. How much does the Marina del Rey project contribute to the Harbor Maintenance Trust Fund each year?

General SCOTT. Sir, the Marina del Rey project does not contribute to the Harbor Maintenance Fund.

NEWPORT BAY HARBOR

Mr. MYERS. What is the primary purpose of the Newport Bay Harbor, California, study?

General SCOTT. The primary purpose of this study is to develop a plan to restore and preserve the Upper Newport Ecological Preserve which includes several endangered species and fish spawning habitat.

PORT HUENEME

Mr. MYERS. Will the Navy contribute to the cost of Port Hueneme, California, study?

General SCOTT. No sir, our study is evaluating the feasibility of improvements related to commercial navigation, only.

LEONARD RANCH

Mr. MYERS. Will the use of Leonard Ranch as a dredged material disposal site require authorization?

General SCOTT. Yes, the Leonard Ranch project will require authorization prior to construction.

Mr. MYERS. If local project sponsors are required to furnish disposal sites for Federal navigation projects in the San Francisco Bay area, why shouldn't this study be 100% locally funded?

General SCOTT. Section 316 of WRDA 1992 directed the Corps to study the feasibility of establishing a transfer facility at Leonard Ranch. In accordance with the WRDA 1986, reconnaissance studies are conducted at Federal cost.

GILA RIVER AND TRIBUTARIES, LOWER SANTA CRUZ

Mr. MYERS. What is the status of the Gila River and Tributaries, Lower Santa Cruz, Arizona, study?

General SCOTT. The study was terminated in September 1994 by joint decision of the Corps and the local sponsor, Pinal County, Arizona, because an implementable plan could not be found.

UPPER SACRAMENTO RIVER
FISH AND WILDLIFE HABITAT RESTORATION

Mr. MYERS. What is the status of the Northern California Streams, Upper Sacramento River Fish and Wildlife Habitat Restoration, California, study?

General SCOTT. We completed the reconnaissance report in March 1994. No local sponsor was found to continue into the cost-shared feasibility phase, but one of the identified sites in the report, Golden State Island, is being pursued as an environmental restoration project under our Section 1135, Continuing Authorities Program.

WESTSIDE TRIBUTARIES TO YOLO BYPASS

Mr. MYERS. What is the status of the Northern California Streams, Westside Tributaries to Yolo Bypass, California, study?

General SCOTT. We completed the reconnaissance report in June 1994, but the sponsor lacked the financial capability to continue into cost-shared feasibility phase, and the study has been delayed.

SOUTH SACRAMENTO COUNTY STREAMS

Mr. MYERS. Why has the estimated cost of the San Joaquin River Basin, South Sacramento County Streams, California, feasibility study increased by $1,000,000 since last year?

General SCOTT. The cost increase results from the requirement to prepare a Supplemental Evaluation Information document to assure Federal interest in the study and additional feasibility efforts negotiated with the local sponsor.

Mr. MYERS. Do you still expect to execute the feasibility cost-sharing agreement this March?

General SCOTT. Yes, we expect to execute the Feasibility cost-sharing agreement on March 24, 1995.

SEVEN OAKS DAM

Mr. MYERS. Please give us some examples of the types of water conservation measures that could be implemented at Seven Oaks Dam in California?

General SCOTT. The primary water conservation measure could be temporary storage in the reservoir flood control pool during the off-season. We are also considering temporary storage in portions of the pool reserved for debris. In all cases, the proposed measures would not impact on the authorized flood control purpose of the project.

UPPER GUADALUPE RIVER

Mr. MYERS. Why has the scheduled completion date for the Upper Guadalupe River, California, feasibility study slipped by over two years?

General SCOTT. The scheduled completion date for Upper Guadalupe River, California, feasibility study slipped due to a requirement to fully analyze changed hydraulic conditions due to recently proposed local construction. Additional technical studies as well as reformulation of the recommended plan are necessary based on this new information.

BATTLE MOUNTAIN, NEVADA

Mr. MYERS. What is the status of the Battle Mountain, Nevada, study?

General SCOTT. We completed the reconnaissance report in August 1994. Feasible alternatives were identified, but because the potential project was relatively small, additional study was proposed under our Continuing Authorities Program as a Section 205 small flood control project. However, as a result of the recent proposal to terminate the Continuing Authorities Program for flood control in FY 1996, the study is currently unscheduled.

SEVIER RIVER, UTAH

Mr. MYERS. What is the status of the Sevier River and Tributaries, Utah, study?

General SCOTT. We completed the reconnaissance report in March 1994. No economically feasible flood control alternatives were identified. However, a potential environmental restoration project for Redmond Channel appears favorable and we are currently preparing a Project Modification Report within the authority of our Section 1135 Continuing Authorities Program.

MISSION BAY

Mr. MYERS. What is the status of the Mission Bay, San Diego County, California, study?

General SCOTT. The Mission Bay study was terminated in March 1994 when it was determined that existing beaches are wide enough to minimize damage potential from coastal storms.

AMERICAN RIVER WATERSHED

Mr. MYERS. What is your current estimate for a completion date for preconstruction engineering and design for the American River Watershed, California, project?

General SCOTT. The Preconstruction Engineering and Design completion date for the American River Watershed cannot be determined until the project plan is decided.

KAWEAH RIVER

Mr. MYERS. What is the status of the Kaweah River, California, project?

General SCOTT. We signed a revised feasibility cost-sharing agreement in November 1994 and are continuing with feasibility studies. We expect to complete the feasibility phase in February 1996. However, this project does not meet criteria for national significance and is not budgeted beyond completion of the feasibility phase.

LOS ANGELES HARBOR

Mr. MYERS. The justification sheets for the Los Angeles Harbor, California, project state, "FY 1996 construction start meets commitment to sponsor to share in construction." What commitments have been made to the project sponsor?

General SCOTT. No, formal commitment has been made; however, by letter dated June 28, 1994, the Assistant Secretary of the Army for Civil Works agreed to credit the sponsor under the authority of Section 4(d) of the Water Resources Development Act of 1988. If the project is funded as a new construction start in FY 1996 as requested, we will execute a Project Cooperation Agreement with the Port of Los Angeles that formally commits us to credit the sponsor in the amount of about $63.8 million for work they currently have underway, as well as completing the remaining portion of the project.

MORRO BAY HARBOR

Mr. MYERS. Do you still expect to execute the project cooperation agreement for the Morro Bay Harbor, California, project on the 28th of this month?

General SCOTT. No, the execution of the project cooperation agreement was delayed two months due to additional coordination efforts with the local sponsor on issues relative to future operation and maintenance of the project.

OAKLAND HARBOR

Mr. MYERS. Have all the dredged material disposal problems for the Oakland Harbor, California, project been resolved so work can begin on the 42-foot project?

General SCOTT. Yes, the Ocean disposal site and Sonoma Baylands are ready to receive dredged material. The disposal site at Galbraith Golf Course is scheduled to be ready in June 1995.

Mr. MYERS. Has the contractor begun work on the project?

General SCOTT. Yes, the Notice to Proceed on the construction contract was issued January 9, 1995. The contractor is mobilizing equipment and has placed part of a discharge pipe at Sonoma Baylands. Actual dredging of the Outer Harbor will start in April 1995 with disposal of material at Sonoma Baylands. Inner Harbor dredging is scheduled to start in October 1995.

RICHMOND HARBOR

Mr. MYERS. Have all the dredged material disposal problems for the Richmond Harbor, California, project been resolved so that work can begin?

General SCOTT. No, the disposal site for contaminated material is under study and design by the Port of Richmond.

Mr. MYERS. When will construction begin?

General SCOTT. Construction is scheduled to be initiated in April 1996.

BULLS HEAD CHANNEL
SAN FRANCISCO BAY TO STOCKTON

Mr. MYERS. Why is the Bulls Head Channel portion of the San Francisco Bay to Stockton, California, project unprogrammed?

General SCOTT. Completion dates for all work after September 1997 are being determined. The dates will be determined during preparation of the FY 1997 budget request based on out-year ceilings and available carryover funds from prior appropriations to other Corps projects.

Mr. MYERS. Please provide a more detailed explanation of the last sentence of the "Other Information" section of the justification sheets.

General SCOTT. In 1989, the Suisun Bay Channel portion of the authorized project was determined to be not economically feasible and was reclassified to the deferred category. Subsequently, the local sponsor funded a study which determined that a short reach of the Suisun Bay Channel, called Bulls Head Channel, is now economically feasible. The entire Suisun Bay Channel was reactivated in 1993, but only the feasible Bulls Head Channel will be constructed and the remainder of the Suisun Bay Channel will be deleted from the project as it remains not economically feasible.

SONOMA BAYLANDS WETLANDS DEMONSTRATION PROJECT

Mr. MYERS. When will the Sonoma Baylands, California, area be available for receipt of the dredged material from the Oakland Harbor project?

General SCOTT. Sonoma Baylands is currently available to receive dredged material from the Oakland Harbor project.

Mr. MYERS. How much has been appropriated to date for the Sonoma Baylands project?

General SCOTT. Funds of $12,375,000 have been appropriated for the Sonoma Baylands project.

Mr. MYERS. Of the total appropriated, how much is required for completion of the project?

General SCOTT. Based on the actual reduced cost to prepare the Sonoma Baylands site and the favorable bids to place dredged material at the site, the current estimated Federal cost to complete the Sonoma Baylands project is $6,375,000. We intend to reprogram any remaining surplus funds to other high priority projects.

SURFSIDE-SUNSET AND NEWPORT BEACH

Mr. MYERS. When will you complete your analysis of the financial capability of Orange County to participate in the Surfside-Sunset and Newport Beach, California, project?

General SCOTT. We will complete our analysis of Orange County's financial capability to participate in the Surfside-Sunset and Newport Beach project in late summer. Orange County expects to have their budget approved in June 1995 and have funds available for the July 1996 Stage 10 Construction Contract.

Mr. MYERS. What will occur if Orange County is unable to participate in the project?

General SCOTT. If Orange County is unable to provide its share of Stage 10 construction cost, the advertisement of the contract will be postponed. Orange County, however, is very supportive of this project and fully expects to have funds available to meet the July 1996 scheduled advertisement.

Mr. MYERS. Will nourishment at West Newport Beach be included in the Stage 10 project as requested by the City of Huntington Beach and the State of California?

General SCOTT. No determination has been made to include nourishment at West Newport Beach in Stage 10. However, the request is being reviewed, and a decision will be made in March 1995.

NOGALES WASH

Mr. MYERS. When will you know if the local sponsor for the Nogales Wash, Arizona, project is capable of providing its share of project costs?

General SCOTT. Santa Cruz County, the local sponsor, is currently negotiating with Farmers Home Authority to finance their share of the project. The sponsor expects to have the loan by the end of August 1995.

LOS ANGELES COUNTY DRAINAGE AREA

Mr. MYERS. Do you still expect to execute the project cooperation agreement for the Los Angeles County Drainage Area, California, project in March of this year?

General SCOTT. No; our sponsor plans to present the Project Cooperation Agreement, along with the Master Environmental Impact Report to the Los Angeles County Board of Supervisors for approval on April 6, 1995. We will execute the PCA as soon as possible after that date.

MERCED COUNTY STREAMS

Mr. MYERS. What work is included in the programmed and unprogrammed balances to complete the Merced County Streams, California, project?

General SCOTT. The programmed work includes final completion of Castle Dam construction, as well as engineering and design activities to complete a supplemental design memorandum and environmental impact statement for the Bear Creek element of the project. The actual construction of the Bear Creek element is unprogrammed.

Mr. MYERS. When will a decision be made whether or not to proceed with the remainder of the project?

General SCOTT. The Bear Creek element could be ready for construction in Fiscal Year 1998. However, it does not meet the criteria of National Significance and will not be scheduled.

SANTA ANA RIVER MAINSTEM

Mr. MYERS. Please provide the Committee with a status report on the construction of the San Timoteo Creek feature of the Santa Ana River Mainstem, California, project.

General SCOTT. Reach 1 of the San Timoteo feature, covering slightly less than a mile of channel, was awarded late September 1994, but the contractor chose to wait until after the rainy season to start construction. The work is scheduled to initiate in March and complete in April 1995. The Reach 2 contract, almost two miles of channel, will be awarded in early August 1995 and completed in October 1995.

Mr. MYERS. Are funds included in the budget request to continue that work? If not, why not?

General SCOTT. No funds are programmed to continue San Timoteo Creek. As in prior years, construction will be undertaken only to the extent that funds are included in Act language.

Mr. MYERS. When will you complete your analysis of Orange County's capability to continue to participate in the project?

General SCOTT. Sir, we have completed our analysis for ongoing features of the project. The Orange County Flood Control District has committed to the completion of the Lower Santa River and Seven Oaks Dam construction and we have affirmed the Districts financial capability for that work. However, the District is still evaluating its capability to participate in the Prado Dam feature of the project, and we expect significant delays from prior schedules. Accordingly, the Prado Dam feature of the project is currently not programmed.

Mr. MYERS. Please explain the post-contract award and other estimating adjustments that caused the cost estimate of the project to decrease by $118 million.

General SCOTT. As a result of the prevailing economic climate in Southern California, the Santa Ana project has benefited from a very competitive construction industry, resulting in bids from 5 to 25 percent below estimates. The decrease of $118 million is the cumulative effect of 14 construction contract awards, the latest being the award of the Seven Oaks Dam Embankment and Spillway contract at $167 million, 25 percent below the project cost estimate. This bid was also $29 million below the next low bidder.

TROPICANA AND FLAMINGO WASHES

Mr. MYERS. Has the project cooperation agreement for the Tropicana and Flamingo Washes, Nevada, project been executed?

General SCOTT. Yes, the Project Cooperation Agreement was executed February 7, 1995.

Mr. MYERS. When will construction begin?

General SCOTT. The contract for the modification of Red Rock Dam is scheduled for award in mid-May 1995, and construction will begin shortly thereafter.

GLENN-COLUSA IRRIGATION DISTRICT

Mr. MYERS. What is the status of the Sacramento River Flood Control Project (Glenn-Colusa Irrigation District), California, project?

General SCOTT. We are continuing to coordinate with the Bureau of Reclamation, the State and the irrigation district to develop a comprehensive solution to the fish screen and pumping issues. We have completed preliminary design data for a gradient restoration structure, but will not finalize the design unless gradient restoration is included in the plan of improvement, currently scheduled to be selected in the spring of 1996.

SACRAMENTO RIVER FLOOD CONTROL

Mr. MYERS. In fiscal year 1995, $3,700,000 was provided for the Sacramento River Flood Control (Deficiency Correction), California, project. How are those funds being utilized?

General SCOTT. We will expend $2,900,000 to complete design of the Mid Valley area, continue design of the Lower Sacramento area and initiate design of the Upper Sacramento area for levee reconstruction. We plan to carryover the remaining $800,000 into Fiscal Year 1996 to continue design efforts on the Upper and Lower Sacramento areas.

SAN FRANCISCO BAY LONG TERM MANAGEMENT STRATEGY

Mr. MYERS. Please provide the Committee with a status report of the San Francisco Bay Long Term Management Strategy, California, effort.

General SCOTT. The development of a Long Term Management Strategy for material dredged from San Francisco Bay is continuing in a very satisfactory manner. Current efforts are focused on a policy Environmental Impact Statement/Report, covering the decision making framework for future disposal actions. We are also very close to providing a single point of contact and a single application form for all dredge permit actions.

Mr. MYERS. When will it be completed?

General SCOTT. The LTMS will be completed and ready for implementation in August 1996.

OCEANSIDE HARBOR SAND BYPASS

Mr. MYERS. How are the funds provided in fiscal year 1995 for the Oceanside Harbor, California, sand bypass project being utilized?

General SCOTT. The fiscal year 1995 funds of $1.5 million, combined with carryover funds in the amount of $3.4 million, are being used to award the Phase III construction contract to repair the existing discharge pipeline to convert the temporary pipeline alignment to a permanent alignment, and to test and operate the system.

Mr. MYERS. Who is responsible for operation and maintenance of that project?

General SCOTT. The Corps of Engineers is currently responsible for operation and maintenance of the sand bypass plant. The plant is experimental in nature. We intend to operate and maintain the system for about one month to confirm that the project functions as designed. A supplemental report was prepared by the Los Angeles District and forwarded by the South Pacific Division Commander to our Washington

Headquarters on 17 August 1993. That supplemental report concluded it was not cost effective to continue operating the sand bypass system. Accordingly, it is doubtful that future budget requests would contain funds for continued operation and maintenance of the system.

SUCCESS LAKE DAM

Mr. MYERS. What is the status of the seismic studies being undertaken at the Success Lake Dam, California, project?

General SCOTT. We completed a liquefaction determination in June 1994 and concluded that additional deformation analysis is required to determine if remediation design and construction are required. We expect this additional seismic analysis to be complete in June 1996. If the seismic analysis indicates remedial measures are required, a schedule for design and construction of those measures would be developed by July 1996.

TUCSON DIVERSION CHANNEL

Mr. MYERS. Are you proceeding with the construction of recreational facilities along the Tucson Diversion Channel in Arizona as directed in the FY 1995 Energy and Water Development Appropriations Act?

General SCOTT. Yes, we have completed the updated Master Plan and environmental documentation and are now preparing plans and specifications for construction of the recreational facilities. We will initiate actual construction in Fiscal Year 1996, utilizing funds currently available.

QUESTIONS FOR THE RECORD FROM MR. HAYWORTH

GILA RIVER, NORTH SCOTTSDALE DRAINAGE AREA

Question. What funds are required to complete the reconnaissance phase and initiate the feasibility phase for the study of flooding problems - North Scottsdale Drainage, Gila River and tributaries, Arizona?

Answer. The $400,000 requested in the FY 1996 budget will complete the reconnaissance phase. The Corps has no capability to initiate the Gila River, North Scottsdale Drainage Area feasibility study because it does not meet the criteria of National Significance. Should a change in this criteria occur, the optimum amount for the first year of funding for the feasibility phase would be $50,000.

RIO DE FLAG, FLAGSTAFF

Question. Does the Corps have the capability to initiate a reconnaissance study on the Rio de Flag floodplain in the city of Flagstaff, Arizona?

Answer. No; the Corps has no capability to initiate the Rio de Flag study because it does not meet the criteria of National Significance.

QUESTIONS FOR THE RECORD FROM MR. KIM

SAN ANTONIO CREEK

Question. As you know, the Army Corps of Engineers has placed a moratorium on new storm drain and runoff connections to the San Antonio Creek channel until a comprehensive reconnaissance study of the area has been completed. New development in the region has been effectively halted by the Corps' actions. To end this untenable situation this subcommittee provided $400,000 in FY 95 for a reconnaissance study of flooding problems along San Antonio Creek.

Although the subcommittee appropriated $400,000 for the San Antonio Creek study in FY 95, your FY 96 budget request indicates only $300,000 will be obligated in 1995.

Why have you not allocated the full $400,000 in 1995?

Answer. Due to other high priority work, we cannot initiate the study until April 1995, and $300,000 is the maximum amount that can effectively be used this fiscal year. The excess funds were reprogrammed to another study.

Question. When do you intend to obligate the remaining $100,000 for the San Antonio Creek study?

Answer. The remaining $100,000 is included in the FY 1996 budget request of $150,000 and will be obligated next fiscal year to complete the reconnaissance study.

QUESTIONS FOR THE RECORD FROM MR. PASTOR

GILA RIVER, TORTOLITA DRAINAGE AREA

Question. In accord with the policy on seamless funding, the Corps traditionally requests funds for the follow-on feasibility phase of study. What amount of funds would be required to initiate the feasibility study for Tortolitas Drainage Area, Arizona in FY 1996?

Answer. The Corps has no capability to initiate the Gila River, Tortolita Drainage Area study because it does not meet the criteria of National Significance. Should a change in this criteria occur, the optimum amount for the first year of funding for the feasibility phase would be $100,000.

GILA RIVER, NORTH SCOTTSDALE DRAINAGE AREA, ARIZONA

Question. The City of Scottsdale has expressed a desire to expedite the study process for the North Scottsdale Drainage Area, Arizona as much as possible. Upon completion of the reconnaissance study, what funds would be required to initiate feasibility study efforts in 1996?

Answer. The Corps has no capability to initiate the Gila River, North Scottsdale Drainage Area study because it does not meet the criteria of National Significance. Should a change in this criteria occur, the optimum amount for the first year of funding for the feasibility phase would be $50,000.

RIO SALADO

Question. Is the Corps fully funded to continue the feasibility studies of environmental restoration and associated recreation measures at the cities of Tempe and Phoenix, Rio Salado, Arizona in FY 1996?

Answer. The budget includes $300,000 to continue the Rio Salado feasibility study in FY 1996. Follow-on funds in the amount of $420,000 and $305,000 will be required in FY 1997 and FY 1998, respectively, to complete the study.

ALAMO DAM

Question. What funds would be required to initiate a feasibility study for environmental restoration at Alamo Dam, Bill Williams River, Arizona.

Answer. Sufficient funds in the amount of $138,000 are included in the budget to initiate this feasibility study in FY 1996.

TAT MOMOLIKOT DAM

Question. Does the Corps have the capability to initiate a water conservation reconnaissance study of Tat Momolikot Dam for the Tohono O'odham Nation in FY 1996?

Answer. No, we do not have a capability to initiate a water conservation reconnaissance study at Tat Momolikot Dam in FY 1996.

QUESTIONS FOR THE RECORD FROM MR. STUMP

ARIZONA FLOOD CONTROL RECONNAISSANCE STUDY

Question. General, we are aware that the Corps recently completed the Arizona Flood Control Reconnaissance Study with a recommendation for Corps participation in a statewide flood warning system. We are also aware that it was recommended that the study be continued under the Corps Continuing Authorities Program Section 205 Preconstruction, Engineering and Design Phase. What is the current status of the study, and what funding will be required to complete the study and build the statewide flood warning system?

Answer. The reconnaissance study was completed on September 5, 1994. We are continuing to negotiate with the State of Arizona regarding portions of the standard Project Cooperation Agreement that are unacceptable to them. We estimate the Section 205 design effort would cost $200,000, the flood warning system would cost $1.4 million and annual operations and maintenance would cost $30,000.

ALAMO DAM

Question. What funds would be required to initiate a Feasibility for Environmental Restoration, Alamo Dam, Bill Williams River, Arizona?

Answer. Sufficient funds in the amount of $138,000 are included in the budget to initiate this feasibility study in FY 1996.

THURSDAY, FEBRUARY 23, 1995.

NORTH ATLANTIC DIVISION

WITNESSES

BRIGADIER GENERAL MILTON HUNTER, COMMANDING GENERAL

BRUCE A. BERGMANN, CHIEF, CIVIL WORKS DIVISION, PROGRAMS MANAGEMENT DIRECTORATE

WILLIAM C. SUTYAK, P.E., P.P., CIVIL WORKS DIVISION, PROGRAMS MANAGEMENT DIRECTORATE

Mr. MYERS. The committee is pleased to welcome General Hunter in his first appearance in his capacity as Division Commander for the North Atlantic Division.

We, of course, have known you through the years, but we are pleased to have you today in your new capacity. Your prepared statement will be in the record, if you would like to summarize, please proceed as you care to. Welcome to the committee.

INTRODUCTION

General HUNTER. Thank you, Mr. Chairman. Thank you very much.

Mr. Chairman, distinguished Members of the subcommittee, I am honored to appear before you again this time as the Commander of the North Atlantic Division, a position I assumed on the 22nd of September, 1994.

If I may, Mr. Chairman, I would like to recognize some Members of my staff that are also with me today. On my right is Mr. Bruce Bergmann, Chief of my Civil Works Division. Also on my left is Mr. William Sutyak, also from the Civil Works Division. I also have some members of my staff in the audience here. I would like to recognize Mr. Bruce Beechley from Operations Division, Mr. Sam Tosi, my Chief of Planning, Mr. Andy Cotroneo, from my Civil Works Division, Mr. Ed Cohn, my Director of Programs Management, Mr. Moses Fins from Civil Works Division, and Ms. Diane Dunnigan.

Mr. MYERS. Who is running the shop today?

General HUNTER. Second team, sir.

If I may, I will give you a status report on the division's Civil Works program and present our fiscal year 1996 budget request.

Mr. Chairman, with your permission, I will give a short presentation and submit a formal statement for the record.

DIVISION CIVIL WORKS BOUNDARIES AND STATISTICS

The North Atlantic Division covers much of the Northeastern United States, a densely populated area that is both urban and rural. This map shows the division's civil works boundaries.

Our area includes all or portions of 11 States and the District of Columbia. We serve 41 million people and 86 congressional districts.

We cover 10,000 miles of shoreline and 2,300 miles of Federal navigation channels. Four of the Nation's top 10 ports are among the 100 we serve in our region.

New York Harbor is the largest container port on the East Coast. The Port of Philadelphia is the world's largest inland freshwater port. Baltimore Harbor is a major entry point for goods heading into the Midwest. And Norfolk Harbor is the Nation's number-one coal port.

We own and operate twenty-two dams, nine major bridges, four locks and three canals, including the Chesapeake and Delaware Canal, which is the country's largest sea level canal. We operate recreation facilities at some of our dam sites, including Blue Marsh, Pennsylvania, a popular recreation facility in the Northeast.

Water resources activities are critical to the Northeast. In 1994, our flood control projects prevented over $108 million in damages during flood events. Last October, we dedicated completed projects at Lockhaven, Pennsylvania, and Richmond, Virginia.

Our region's four major ports handled over $100 billion worth of commerce. Last year, we completed our navigation project at Shinnecock Inlet, New York.

Our beach erosion control projects provide annual benefits in excess of $60 million. We are nourishing several beaches along the Atlantic coast in New York, New Jersey, Delaware and Virginia.

In 1994, we completed the initial construction of the Coney Island, New York, project and turned over the Atlantic Coast of Maryland project to the local sponsor. We will periodically nourish these two beach projects in the future as needed.

STATUS OF FISCAL YEAR 1995 PROGRAM

With the funds provided in fiscal year 1995, we will complete fourteen General Investigations studies, one design project, and three construction projects.

We are also starting nine General Investigations studies, two design projects, and six construction projects.

STATUS OF FISCAL YEAR 1996 PROGRAM

With the funds requested in fiscal year 1996, we will continue making progress. We will start six General Investigations studies. Our request will continue twenty-two general investigation studies, seven design projects, and seventeen construction projects. And we will complete thirteen General Investigations studies, four design projects, and two construction projects.

FISCAL YEAR 1996 PROGRAM SUMMARY

We are requesting $249.1 million for water resource activities in fiscal year 1996. This request, together with a programmed carryover of $26.3 million from Fiscal Year 1995, provides a total program of $275.4 million. Our General Investigations program is $21.4 million. The Construction, General program is $96.5 million.

Operation and Maintenance, our largest category, is $157.5 million. In addition, our local sponsors will contribute nearly $39 million.

GENERAL INVESTIGATIONS PROGRAM

Our General Investigations program includes $21.4 million to work on forty-one studies and eleven design projects. I will briefly describe a few of our General Investigations activities.

DELAWARE BAY COASTLINE, DE AND NJ

We are evaluating potential measures to alleviate storm damages along the Delaware Bay coastline in Delaware and New Jersey.

DELAWARE RIVER MAIN CHANNEL DEEPENING, DE, NJ AND PA

Design continues on our Delaware River Main Channel Deepening project. We plan to deepen the channel to 45 feet from Delaware Bay to the Port of Philadelphia.

BALTIMORE HARBOR ANCHORAGES AND CHANNELS, MD AND VA

Our survey for Baltimore Harbor, Maryland continues. We are addressing the need to expand a Federal anchorage and access channels in this busy port.

ANACOSTIA RIVER FEDERAL FACILITIES IMPACT ASSESSMENT, MD AND DC

Our request will start an assessment for the Federal facilities on the Anacostia River.

RARITAN RIVER BASIN, GREEN BROOK SUB-BASIN, NJ

We continue to design the Raritan River Basin, Green Brook project in New Jersey. Our flood control work is being closely coordinated with local interests.

NEW YORK HARBOR ANCHORAGES AREAS, NY

The anchorages in New York Harbor are overcrowded and lack sufficient depth. We are studying ways to improve them and the feasibility of creating additional ones.

ATLANTIC INTRACOASTAL WATERWAY BRIDGE AT GREAT BRIDGE, VA

We will complete design of a bigger, safer and more modern Atlantic Intracoastal Waterway bridge at Great Bridge, Virginia.

NANSEMOND RIVER BASIN, SUFFOLK, VA

We will begin our study to evaluate the impact of rapid population growth and the development on the water resources of the Nansemond River Basin in Suffolk, Virginia.

CONSTRUCTION, GENERAL PROGRAM

Our Construction, General Program includes $96.5 million for 19 construction projects. I will briefly discuss some of our activities in this area.

SANDY HOOK TO BARNEGAT INLET, NJ

I am proud to report that we are completing our initial work on the Monmouth Beach to Sea Bright portion of our Sandy Hook to Barnegat Inlet, New Jersey, project. This summer, work will begin on the Sea Bright to Highlands Beach portion. In addition, design will continue for the Long Branch and Deal to Loch Arbour portions.

We are also accelerating design for the section II portion of the project, Asbury Park to Manasquan, to begin construction.

WYOMING VALLEY, PA

We will start construction on the Wyoming Valley levee raising project in Pennsylvania, to protect the valley from flooding. A recurrence of tropical storm Agnes today would cause $2 billion in damages.

JAMES R. OLIN FLOOD CONTROL PROJECT, VA

We will continue construction of the James R. Olin Flood Control Project in Virginia, with requested funds. It includes levees, flood walls, and channel modifications to protect the City of Buena Vista.

MOOREFIELD AND PETERSBURG, WV

Our projects at Moorefield and Petersburg, West Virginia, will protect these towns from storms like Tropical Storm Juan, which caused over $57 million in damages in 1985. We will continue construction with requested funds.

OPERATION AND MAINTENANCE, GENERAL PROGRAM

Our Fiscal Year 1996 Operation and Maintenance program contains $157.5 million. These funds will continue sixty-one navigation projects, thirty-two flood control projects, eighty-six inspections of completed projects, and eight activities to protect navigation.

CONCLUSION

Mr. Chairman, we are your United States Army Corps of Engineers working to make a better natural and human environment for our densely populated region. Our vision is to be the team of choice, providing customer focus and quality engineering services.

Sir, this concludes my presentation. I will be pleased to answer any questions.

[The statement of General Hunter follows:]

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

NORTH ATLANTIC DIVISION

COMPLETE STATEMENT
OF
BRIGADIER GENERAL MILTON HUNTER
COMMANDER, NORTH ATLANTIC DIVISION

BEFORE THE
SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT
COMMITTEE ON APPROPRIATIONS
UNITED STATES HOUSE OF REPRESENTATIVES
ON THE
FISCAL YEAR 1996 CIVIL WORKS BUDGET

23 February 1995

INTRODUCTION

Mr. Chairman and distinguished members of the sub-committee, I am Brigadier General Milton Hunter, Commanding General, North Atlantic Division. I am submitting, with your permission, the North Atlantic Division's civil works status report and the Fiscal Year 1996 budget request.

NAD OVERVIEW

The North Atlantic Division (NAD) covers much of the northeastern United States, a heavily populated area that's urban and rural, has manufacturing and agriculture, and supports large and small waterborne commerce. Our boundaries include 10,000 miles of shoreline, 2,300 miles of Federal navigation channels, and over 100 important ports and harbors. In fact, four of the nation's top ten ports are within our boundaries. They are: New York Harbor, the largest container port on the east coast; Philadelphia Harbor, the world's largest inland freshwater port; Baltimore Harbor, a major entry point for goods heading to the midwest; and Norfolk Harbor, the nation's number one coal port. We operate and maintain four major locks and three canals, including the Delaware and Chesapeake Canal which is the country's largest sea level canal. We own and operate twenty-two major dams, nine major bridges. We operate many recreation facilities at some of our dam sites, including Blue Marsh, Pennsylvania, which is a popular recreation facility in the Northeast. We also operate the Washington Aqueduct which supplies metropolitan Washington, DC, area with 250 million gallons of water each day.

AREA OF RESPONSIBILITY

NAD's civil works boundaries include all or parts of 11 states and the District of Columbia. We have District offices in New York, Philadelphia, Baltimore, and Norfolk. We have water resource activities in the Hudson, Delaware, Susquehanna, Potomac, James and other river basins. NAD, is also responsible for the Corps' efforts in the Chesapeake and Delaware Bays and for the Atlantic Coast from Long Island, New York south to the Virginia-North Carolina border.

POLITICAL BOUNDARY

We serve 41 million people. They are represented by 86 members of the House of Representatives, 22 Senators and 11 Governors.

WATER RESOURCES ACTIVITIES

The densely populated northeast depends on its water resources. Navigation, flood control, shoreline protection, and environmental restoration are all vital to the region.

In 1994 our flood control projects prevented over $108 million in damages during flood events. Last October, we dedicated two completed projects in Lock Haven, Pennsylvania, and Richmond, Virginia.

Ships annually transport about $100 billion worth of commerce through our four major ports. This waterborne trade is vital to the nation's growth and prosperity. Last Year, we completed our navigation project at Shinnecock Inlet, New York.

Our beach erosion control projects provide annual benefits in excess of $60 million. We are nourishing several beaches along the Atlantic coast in New York, New Jersey, Delaware, and Virginia. In 1994, we completed the initial construction of the Atlantic Coast of New York City, Rockaway Inlet to Norton Point, Coney Island Area project in New York and turned over the Atlantic Coast of Maryland project to the local sponsor. We will periodically nourish these two beach projects and others in the future as needed.

In the area of 8(a) and other minority architect-engineer contracting, we met our Fiscal Year 1994 goal by issuing fourteen contracts for over $6 million. In Fiscal Year 1995, we expect to meet our goals and have already issued five contracts for nearly $2 million. This represents 29 percent of the architect-engineer contracts issued through the first quarter of Fiscal Year 1995.

RECENT PERFORMANCE

Our Fiscal Year 1994 execution was 54 percent for General Investigations, and 57 percent for Construction, General. The low execution rates were primarily due to proposed restructing of the organization with resultant turmoil in the workforce. In addition, there were scheduling problems, such as delays in executing Project Cooperation Agreements and project land acquisitions. Finally, favorable bids played a role. The Fiscal Year 1995 schedules and the Fiscal Year 1996 budget amounts have been adjusted to improve the execution rates. I am confident that the North Atlantic Division will return to prior performance levels experienced before 1992.

BUDGET SUMMARY

We are requesting $249,062,000 for water resource activities in Fiscal Year 1996. This request together with a programmed carryover of $26,344,000 from Fiscal Year 1995 amounts to a total program of $275,406,000. General Investigations is $21,144,000, together with the Fiscal Year 1995 programmed carryover of $212,000, provides a total program of $21,356,000. Construction, General, is $70,413,000. This request, along with the Fiscal Year 1995 programmed carryover of $26,132,000 provides a total construction program of $96,545,000. Operation and Maintenance, General is our largest category, at $157,505,000. These funds will be combined with $39,136,000 from our local sponsors.

STRUCTURE OF REQUEST

I will start with the Division's General Investigations projects and studies, then discuss our Construction, General projects. I will conclude with a summary of our Operation and Maintenance, General request.

GENERAL INVESTIGATIONS PROGRAM

The proposed Fiscal Year 1996 budget for the General Investigations program is $21,144,000. Fifty-five percent is allocated to our Survey program and forty-five percent to our Preconstruction Engineering and Design program. These funds, together with $6,253,000 from local sponsors, will enable planning, engineering and design for high priority projects and studies.

SURVEY PROGRAM

Our Fiscal Year 1996 General Investigations' program request is $11,656,000, together with a programmed carryover of $188,000, provides for 41 surveys. One of our surveys will be funded with the Fiscal Year 1995 carryover. Local sponsors will contribute $6,253,000 on 23 surveys for a total program of $18,097,000. These funds will allow us to start six reconnaissance phase studies and five feasibility studies, continue seventeen cost-shared feasibility phase studies, and complete twelve reconnaissance phase studies and one cost-shared feasibility phase study, Here is the survey program by state.

FISCAL YEAR 1996 CIVIL WORKS SURVEYS

	FY 1996 Federal Requests	FY 1995 Programmed Carryover	FY 1996 Non-Federal Contributions
DELAWARE			
Chesapeake and Delaware Canal, Baltimore Harbor Connecting Channels, (Deepening) DE & MD	$ 57,000	$ 0	$ 84,000
Delaware Bay Coastline, DE & NJ	$880,000	$ 0	$730,000
Delaware Coast from Cape Henlopen to Fenwick Island	$145,000	$ 0	$210,000

FISCAL YEAR 1996 CIVIL WORKS SURVEYS

	FY 1996 Federal Requests	FY 1995 Programmed Carryover	FY 1996 Non-Federal Contributions
MARYLAND			
Baltimore Harbor Anchorages and Channels, MD & VA	$291,000	$ 0	$193,000
Baltimore Metropolitan Water Resources	$500,000	$ 0	$500,000
Chesapeake Bay Time Variable Model, MD, VA, PA, & DC	$335,000	$ 0	$ 0
Ocean City, MD & Vicinity Water Resources	$850,000	$ 0	$850,000
Anacostia River & Tributaries, MD & DC	$450,000	$ 0	$450,000
Anacostia River Federal Facility Impact Assessment, MD & DC	$300,000	$ 0	$ 0
Lower Eastern Shore	$250,000	$ 0	$ 0
Patuxent River	$350,000	$ 0	$ 0
Jennings Randolph Lake, MD & WV - Reallocation	$200,000	$ 0	$200,000
Smith Island Environmental Restoration	$300,000	$ 0	$ 0
NEW JERSEY			
South River, Raritan River Basin	$ 25,000	$ 0	$ 0
Manasquan Inlet to Barnegat Inlet	$290,000	$ 0	$ 0
Brigantine Inlet to Great Egg Harbor Inlet	$115,000	$ 0	$139,000
Great Egg Harbor Inlet to Townsends Inlet	$290,000	$ 0	$ 0
Lower Cape May Meadows - Cape May Point	$350,000	$ 0	$359,000

FISCAL YEAR 1996 CIVIL WORKS SURVEYS

	FY 1996 Federal Requests	FY 1995 Programmed Carryover	FY 1996 Non-Federal Contributions
NEW JERSEY			
Raritan Bay and Sandy Hook Bay	$620,000	$ 0	$620,000
Raritan Bay and Sandy Hook Bay, Cliffwood Beach	$ 52,000	$ 0	$ 0
Townsends Inlet to Cape May Inlet	$ 80,000	$ 0	$110,000
Stony Brook, Princeton Township	$250,000	$ 0	$ 0
NEW YORK			
Hudson River Habitat Restoration	$350,000	$ 0	$350,000
Lake Montauk Harbor	$195,000	$ 0	$195,000
New York Harbor Anchorage Areas	$100,000	$ 0	$100,000
Raritan Bay Anchorages, New York and New Jersey Channels, NY & NJ	$100,000	$ 0	$100,000
Reynolds Channel and New York State Boat Channel	$170,000	$ 0	$150,000
Atlantic Coast of New York	$1,400,000	$ 0	$ 0
Jamaica Bay, Marine Park and Plumb Beach	$350,000	$ 0	$350,000
Montauk Point	$125,000	$ 0	$125,000
North Shore of Long Island	$ 26,000	$ 0	$ 0
South Shore of Staten Island	$ 30,000	$ 0	$ 0
Yonkers Shoreline	$332,000	$ 0	$ 0
Mattituck Harbor, NY	$250,000	$ 0	$ 0

FISCAL YEAR 1996 CIVIL WORKS SURVEYS

	FY 1996 Federal Requests	FY 1995 Programmed Carryover	FY 1996 Non-Federal Contributions
PENNSYLVANIA			
Juniata River Basin	$ 50,000	$ 0	$ 0
Lackawanna River Basin	$ 0	$188,000	$188,000
Milton	$ 15,000	$ 0	$ 0
Susquehanna River Basin Water Management, NY, PA & MD	$290,000	$ 0	$ 0
VIRGINIA			
Eastern Shore, Accomack and Northampton Counties	$248,000	$ 0	$ 0
Nansemond River Basin	$370,000	$ 0	$ 0
WEST VIRGINIA			
North Branch Potomac River Environmental Restoration, WV & MD	$275,000	$ 0	$ 250,000
Total Surveys (41)	$11,656,000	$188,000	$6,253,000

SMITH ISLAND, MD

In the past century, 1,200 acres of historic Smith Island, MD, has eroded into the Chesapeake Bay. Future erosion will destroy the island if left unchecked. Environmentally vital wetlands are also dwindling. Our Fiscal Year 1996 request of $300,000 will start a reconnaissance study to determine ways to control erosion and restore fish and wildlife habitat. We will start our reconnaissance phase of the study in December 1995. The reconnaissance report is scheduled for completion in November 1996.

MATTITUCK HARBOR, NY

The Mattituck Harbor, NY, study is located on the eastern end of the north fork of Long Island. It will determine the need to improve navigation there by deepening and expanding the existing channel. It will also consider the beneficial uses of material that would be dredged from the channel. Our request of $250,000 will begin the reconnaissance phase of the study. We will start the reconnaissance phase of the study in April 1996. The reconnaissance report is scheduled for completion in March 1997.

ANACOSTIA RIVER FEDERAL WATERSHED IMPACT ASSESSMENT, MD & DC

The Federal government owns approximately 25 square miles of Anacostia River watershed. The Water Resources Development Act of 1992 authorized the Secretary of the Army to assess the impact of Federal facilities on that area, and to explore efforts to restore the environment. We will start the comprehensive assessment in January 1996. Our request for $300,000 will start the comprehensive assessment, scheduled to be completed in June 1997.

LOWER EASTERN SHORE, MD

The Chesapeake Bay, the largest estuary in the United States, has undergone substantial loss and modification of its environmental resources. This is especially true of the Lower Eastern Shore, where development has depleted the environment. We are studying ways to restore fish and wildlife habitat in the region. Fiscal Year 1996 funds of $250,000 will begin the reconnaissance phase of our study. We will start the reconnaissance phase of the study in May 1996. The reconnaissance report is scheduled to be completed in April 1997.

STONY BROOK, PRINCETON TOWNSHIP, NJ

We are studying ways to prevent flood damages, restore wetlands, restore fish and wildlife habitat, and improve water supply and quality in the Stony Brook basin in Princeton Township, NJ. Our request of $250,000 will start a reconnaissance study of the area. We will start the reconnaissance phase of the study in April 1996. The reconnaissance report is scheduled for completion in July 1997.

NANSEMOND RIVER BASIN, SUFFOLK, VA

Population growth and supporting development for the City of Suffolk, VA, and the Nansemond River Basin are projected to rise 25 percent by the year 2000 and 60 percent by the year 2030. There is a definite need to evaluate the impact of such growth and development on future hydrology and the ecosystem. There are also opportunities for environmental and navigational initiatives. Fiscal Year 1996 funds of $370,000 will initiate a reconnaissance study. We will start the reconnaissance phase of the study in April 1996. The reconnaissance report is scheduled to be completed in March 1997.

CHESAPEAKE AND DELAWARE CANAL, BALTIMORE HARBOR CONNECTING CHANNELS, (DEEPENING) DE & MD

The $57,000, requested for the Chesapeake and Delaware Canal, Baltimore Harbor Connecting Channels, (Deepening) DE and MD, will be used to investigate the need for navigation improvements from Delaware Bay to Baltimore Harbor. These funds, along with the Maryland Port Authority matching contributions, will complete the feasibility report and Environmental Impact Statement. The feasibility phase of the study was started in August 1990. The feasibility study is scheduled for completion in September 1996.

BALTIMORE HARBOR ANCHORAGES AND CHANNELS, MD AND VA

The Baltimore Harbor Anchorages and Channels, MD and VA, study addresses the need to improve an existing Federal anchorage area, dredge a new branch channel to South Locust Point, and widen the existing branch channels to Seagirt and Dundalk terminals. Our request of $291,000 will be used to complete the feasibility phase of this study. The feasibility study was started in May 1993. The feasibility study is scheduled for completion in July 1996.

OCEAN CITY MD & VICINITY WATER RESOURCES

Storms, floods, navigation problems and extensive development have affected the water resources of Ocean City, Maryland and nearby areas. We are exploring ways to restore and protect these resources. We are requesting $850,000 in Fiscal Year 1996 to continue the feasibility phase of our study. The State of Maryland, Worcester County and the Town of Ocean City are the local sponsors. The feasibility phase of the study is scheduled to start in April 1995. A completion date is being determined for this feasibility study.

HUDSON RIVER HABITAT RESTORATION, NY

Over the past one hundred years, the Corps has dredged the Hudson River for navigational purposes. During this dredging large amounts of wetlands and aquatic habitat, used by striped bass, shad, atlantic sturgeon and herring, have been lost or damaged. This study will determine the need and measures necessary to reestablish wetlands and aquatic habitat, and remove migration barriers. The New York State Department of Environmental Conservation is the local sponsor. Fiscal Year 1996 funds of $350,000 will be used to begin the feasibility phase of our study. The reconnaissance phase is scheduled to be completed in September 1995, the feasibility study in September 1997.

LAKE MONTAUK HARBOR, NY

The Lake Montauk Harbor study is investigating improvements to navigation, including deepening and widening an existing Federal channel. It is also investigating alternatives to reduce channel maintenance costs by identifying potential beneficial uses of dredged material. Our request of $195,000 will be used to continue into the feasibility phase. The New York State Department of Environmental Conservation is the local sponsor. In October 1995, the reconnaissance phase is scheduled for completion and we will start the feasibility phase. A completion date is being determined for this feasibility study.

NEW YORK HARBOR ANCHORAGE AREAS, NY

The New York Harbor Anchorage Areas, NY, survey is investigating improvements to the existing anchorage areas at Red Hook Flats and Gravesend Bay and providing new areas in New York Harbor. We are requesting $100,000 to continue into the feasibility study. The Port Authority of New York and New Jersey is the local sponsor for the feasibility phase. In July 1995, the reconnaissance phase is scheduled for completion and we will start the feasibility phase. A completion date is being determined for this feasibility study.

RARITAN BAY ANCHORAGES, NEW YORK AND NEW JERSEY CHANNELS

The Raritan Bay Anchorages, New York and New Jersey Channels, NY and NJ, survey is investigating improvements to the existing anchorage areas near Sandy Hook and Perth Amboy, NJ, and the feasibility of providing new areas in Raritan Bay and Lower New York Bay. The requested $100,000 will be used to continue into the feasibility study. The local sponsor is the Port Authority of New York and New Jersey. In July 1995, the reconnaissance phase is scheduled to be completed and we will start the feasibility phase. A completion date is being determined for this feasibility study.

REYNOLDS CHANNEL AND NEW YORK STATE BOAT CHANNEL, NY

The Reynolds Channel and New York State Boat Channel, NY, study is located on the South Shore of Long Island. It will determine the need to improve navigation there by deepening and expanding the existing channel. It will also consider the beneficial uses of material that would be dredged from the channels. Our request of $170,000 will begin the feasibility phase of the study. The local sponsor is the New York State Department of Environmental Conservation. In November 1995, the reconnaissance phase of the study is scheduled for completion and we start the feasibility phase. A completion date is being determined for this feasibility study.

ANACOSTIA RIVER & TRIBUTARIES, MD & DC

The Corps of Engineers involvement in the Anacostia River basin dates back more than 115 years and includes navigation, flood control, debris removal and aquatic vegetation control. The basin has experienced loss of wetlands and fish & wildlife habitat, so the Corps is now studying ways to restore both. Our Fiscal Year 1996 request of $450,000 will continue a second feasibility phase study at the request of the local interests. Potential local sponsors are the State of Maryland, District of Columbia, Prince George's County and Montgomery County. In August 1995, the reconnaissance phase is scheduled for completion and we will start the feasibility phase. A completion date is being determined for this feasibility study.

BALTIMORE METROPOLITAN WATER RESOURCES, MD

The drainage basins and streams in the metropolitan Baltimore area regularly experience flooding. The area's natural environment has also been damaged from flooding and from development. Our Baltimore Metropolitan Water Resources, MD, project is investigating the need for flood protection and environmental restoration. Fiscal Year 1996 funds of $500,000 will continue into the feasibility phase of our study. The State of Maryland is the potential local sponsor for the feasibility phase of the study. In June 1995, the reconnaissance phase is scheduled for completion and we start the feasibility phase. A completion date is being determined for this feasibility study.

PATUXENT RIVER, MD

Fiscal Year 1996 funds of $350,000 will complete the reconnaissance phase of our study to restore and protect the environment in the Patuxent River, MD. Increasing development along the river, which is located between Baltimore and Washington, DC, has caused environmental degradation, particularly a loss of fish and wildlife habitat. The reconnaissance study was started this month. The reconnaissance report is scheduled to be completed in July 1996.

SOUTH RIVER, RARITAN RIVER BASIN, NJ

The South River has a history of flooding. Floods from Hurricane Gloria in 1985 and recent storms have endangered lives, damaged property, and disrupted businesses and transportation systems in several Middlesex County, NJ, communities. This study will consider ways to protect the area from future floods. Fiscal Year 1996 funds of $25,000 will complete our reconnaissance phase study. The reconnaissance study is scheduled to start in June 1994, with the reconnaissance report scheduled for completion in May 1995. The reconnaissance phase is scheduled to be completed in November 1995.

SUSQUEHANNA RIVER BASIN WATER MANAGEMENT, NY, PA & MD

There are fourteen existing Corps reservoirs in the Susquehanna River Basin. The Cowanesque and Curwensville Lakes are the only two that have storage dedicated to industrial water supply. The 1991 drought, when the Cowanesque storage was released to alleviate low flow conditions, showed the need for such storage. The Susquehanna River Basin Commission has tentatively identified other Corps reservoirs for such storage. The study will develop a comprehensive plan to manage the use of stored water with the goal of providing adequate streamflow to maintain aquatic resources in the Susquehanna River reaches and the Chesapeake Bay. The study will also investigate alternatives for future storage and consider related flood damage reduction needs in the basin. Fiscal Year 1996 funds of $290,000 will be used to complete a reconnaissance phase of the study. The reconnaissance study is scheduled to start in April 1995. The reconnaissance report is scheduled to be completed in March 1996.

JUNIATA RIVER BASIN, PA

The Juniata River Basin, PA, annually sustains approximately $6 million in flood damages. Existing flood control projects have also caused degradation or loss of fish and wildlife habitat. We are studying ways to address these problems. Potential local sponsors are the Borough of Tyrone and the Commonwealth of Pennsylvania. Our Fiscal Year 1996 request of $25,000 will be used to complete the reconnaissance phase of our study. The reconnaissance study started in April 1994 and the reconnaissance report is scheduled for completion in September 1995. The reconnaissance phase is scheduled for completion in May 1996.

LACKAWANNA RIVER BASIN

The resources of the Lackawanna River Basin, PA have been exploited for over a century. This has caused increased erosion, flooding, loss of fish and wildlife habitat, and reduced recreational use. We are studying the possibility of correcting these problems by creating a corridor greenway along the Lackawanna River. Carryover funds of $188,000 from Fiscal Year 1995, will be used to continue into the feasibility phase of the study. The feasibility phase of the study is scheduled to start in June 1995. A completion date is being determined for this feasibility study.

MILTON, PA

The Borough of Milton, PA, regularly experiences flooding, including six major floods in the last 60 years. We are studying the feasibility of a flood damage prevention project there. Funds of $15,000 will be used to complete the reconnaissance phase of the study. The local sponsors are the Borough of Milton and the Commonwealth of Pennsylvania. The reconnaissance study started in April 1994 and the reconnaissance report is scheduled for completion in March 1995. The reconnaissance phase is scheduled to be completed in March 1996.

NORTH BRANCH POTOMAC RIVER ENVIRONMENTAL RESTORATION, WV & MD

The Corps of Engineers built the multi-purpose Jennings Randolph Lake project, and partially built the State of Maryland's Savage River Reservoir project. Despite the benefits of these projects, their construction partially contributed to the degradation of the region's fish and wildlife habitat. This study seeks ways to restore that habitat and consider water resources opportunities, including environmental restoration projects. For example, creating wetland areas adjacent to the North Branch of the Potomac would restore habitat and, as a secondary benefit, flood overflow zones would reduce downstream river stages and filter impurities from the water. The states of Maryland and West Virginia, and the Interstate Commission on the Potomac River Basin, are potential sponsors for the feasibility phase of the study. The $275,000 requested for Fiscal Year 1996 will be used to complete the reconnaissance phase of the study and continue into the feasibility phase of our study. In March 1996, the reconnaissance phase is scheduled to be completed and the feasibility phase will start. A completion date is being determined for this feasibility study.

DELAWARE BAY COASTLINE, DE AND NJ

We are evaluating the impacts severe erosion creates along the Delaware Bay Coastline, DE and NJ, and potential measures to alleviate those damages. Our Fiscal Year 1996 request for $880,000 will continue the feasibility phase of the study. The reconnaissance phase was completed in December 1992 for the Delaware areas, and July 1993 for the New Jersey areas. The feasibility studies are scheduled for completion as follows: Broadkill Beach, DE, in October 1996, Maurice River, NJ, in January 1997, Roosevelt Inlet and Lewes Beach, DE, in June 1997, and Port Mahon, DE, in September 1997. Completion dates are being determined for interim feasibility reports at Villas and Vicinity, NJ, Reeds Beach to Pierces Point, NJ, and Oakwood Beach, NJ.

DELAWARE COAST FROM CAPE HENLOPEN TO FENWICK ISLAND

The Delaware coast has a long history of severe erosion which has caused significant economic loss and social disruption, extensive flood damage, and loss of lives. Seven storms have hit the area in the last 20 years, and the December 1992 storm caused an estimated $1 million in damages. We are studying possible shore protection measures to alleviate damages by storms and hurricanes. The reconnaissance phase was completed on 4 May 1992. The State of Delaware is our local sponsor. We are requesting $145,000 to continue the interim feasibility studies for the Rehoboth Beach to Dewey Beach portion of the study which is scheduled for completion in July 1996. Completion dates are being determined for interim feasibility reports at Bethany Beach to South Bethany Beach and the final feasibility report including Fenwick Island.

BRIGANTINE INLET TO GREAT EGG HARBOR INLET, NJ

Brigantine Inlet to Great Egg Harbor Inlet, NJ, is extremely vulnerable during storms, due mostly to a long history of shoreline erosion. Six major storms in the last 10 years have caused extensive damages and loss of life. We are studying ways to make the area less vulnerable to storms, reduce damages, improve coastal planning and engineering, and alleviate coastal erosion. The reconnaissance phase was completed in January 1993. The State of New Jersey Department of Environmental Protection is the local sponsor. The feasibility phase of the study was started in January 1993. Our Fiscal Year 1996 request of $115,000 will be used to continue Absecon Island interim study which is scheduled for completion in December 1996. A completion date is being determined for the final report, including the interim feasibility report at Brigantine Island.

GREAT EGG HARBOR INLET TO TOWNSENDS INLET, NJ

Great Egg Harbor Inlet to Townsends Inlet, NJ, has a history of shoreline erosion, making it vulnerable to direct wave attack during storms. We are studying ways to make the area less vulnerable to storms and alleviate coastal erosion. Our request of $290,000 will be used to complete the reconnaissance phase of our study. The reconnaissance study is scheduled to start in May 1995. The reconnaissance report is scheduled for completion in April 1996.

LOWER CAPE MAY MEADOWS - CAPE MAY POINT, NJ

Our Lower Cape May Meadows - Cape May Point, NJ, study is located along the Southern Atlantic coast of New Jersey. The former contains a state park with wetlands vital to migrating birds. The area also serves as a buffer during storms between the ocean and developed portions of Cape May, including Cape May Point. The latter is at the confluence of the Atlantic Ocean and the Delaware Bay. The interaction of these bodies of water leads to persistent shoreline erosion and makes the entire area vulnerable to damage from flooding during storms. Six major storms have flooded the area in the past 10 years. We are studying the feasibility of constructing shoreline protection projects and restoring and protecting the fish and wildlife habitat in the wetlands. Our request of $350,000 will continue the feasibility phase of our study. The local sponsor is the New Jersey Department of Environmental Protection. In April 1995, the reconnaissance phase is scheduled for completion and we will start the feasibility phase. A completion date is being determined for this feasibility study.

MANASQUAN INLET TO BARNEGAT INLET, NJ

Manasquan Inlet to Barnegat Inlet, NJ, a 24-mile portion of NJ coastline, is extremely vulnerable to storms and has suffered from shoreline erosion. Five major storms in the last 10 years have caused extensive damages and loss of life. We are studying ways to make the area less vulnerable to storms and alleviate coastal erosion. Our Fiscal Year 1996 request of $290,000 will be used to complete the reconnaissance phase of our study. The reconnaissance study is scheduled to start in April 1995. The reconnaissance report is scheduled for completion in March 1996.

RARITAN BAY AND SANDY HOOK BAY, NJ

Flooding is a major problem in the area of Raritan Bay and Sandy Hook Bay, NJ. We are studying the feasibility of providing storm and flood damage reduction measures along the New Jersey bay-shore area. We are requesting $620,000 in Fiscal Year 1996 to continue the feasibility phase of our study. The reconnaissance phase was completed in February 1994 and we started the feasibility phase. The local sponsor is the State of New Jersey Department of Environmental Protection. The interim feasibility report at Port Monmouth is scheduled for completion in March 1997. Completion dates are being determined for interim feasibility reports at Union Beach, Leonardo, Highlands, Keyport and the final report.

RARITAN BAY AND SANDY HOOK BAY, CLIFFWOOD BEACH, NJ

Cliffwood Beach, NJ, suffers from tidal flooding and beach erosion. A Federal project to address these concerns was authorized by the Flood Control Act of 1962, but never constructed due to a lack of local cooperation. A reconnaissance study is reevaluating existing conditions. Our request for $52,000 will complete the reconnaissance phase of the study. The reconnaissance study is scheduled to start in June 1995. The reconnaissance report is scheduled to be completed in May 1996.

TOWNSENDS INLET TO CAPE MAY INLET, NJ

Townsends Inlet to Cape May Inlet, NJ, is extremely vulnerable during storms, due mostly to a long history of shoreline erosion. Six major storms in the last 10 years have caused extensive damage and loss of life. We are studying ways to make the area less vulnerable to storms, reduce damages, improve coastal planning and engineering, and alleviate coastal erosion. Our Fiscal Year 1996 request is $80,000 to continue the feasibility study and Environmental Impact Study. The reconnaissance phase was completed in November 1992. The local sponsor is the New Jersey Department of Environmental Protection. The feasibility phase of the study started in November 1992. The feasibility study is scheduled to be completed in March 1997.

ATLANTIC COAST OF NEW YORK

The Atlantic Coast of New York from Coney Island to Montauk Point is subjected to severe storms causing property damage from flooding and shoreline erosion. Our effort will monitor the coastal processes to assemble data which addresses short and long term post storm actions. The comprehensive database that will be developed will assist both Federal and local interests to determining site specific storm damage reduction and erosion control measures. The $1,400,000 requested in Fiscal Year 1996 will be used to continue the seasonal and post-storm monitoring efforts and testing and implementation of the computer database. A completion date is being determined for this monitoring program.

JAMAICA BAY, MARINE PARK AND PLUMB BEACH, NY

Jamaica Bay, Marine Park and Plumb Beach, NY, are exposed to damage from severe coastal storm events. Erosion at Plumb Beach threatens a portion of the Belt Parkway, a major highway. We are studying the feasibility of providing storm damage protection in the area. We are requesting $350,000 in Fiscal Year 1996 to continue the feasibility phase of our study. The New York State Department of Environmental Conservation is the local sponsor. In April 1995, the reconnaissance phase is scheduled for completion and we will start the feasibility phase of the study. A completion date is being determined for this feasibility study.

MONTAUK POINT, NY

Montauk Point, NY, contains a state park that includes a historic lighthouse commissioned by George Washington in 1796. The lighthouse is the focal point of the Montauk Point Coast Guard Station and is a junction marker for ships headed for New York Harbor and Long Island Sound. It was originally about 200 feet from the bluff on which it sits, but erosion has left it only 75 feet from the edge. We are determining if hurricane and storm protection improvements are needed in the area, and are asking for $125,000 in Fiscal Year 1996 to continue the feasibility phase of our study. The New York State Department of Environmental Conservation is the potential local sponsor. In July 1995, the reconnaissance phase is scheduled to be completed and we will start the feasibility phase of the study. A completion date is being determined for this feasibility study.

NORTH SHORE OF LONG ISLAND, NY

The North Shore of Long Island in Nassau and Suffolk Counties has a considerable history of tidal flooding and storm damages. In December 1992, a northeaster inundated hundreds of residential and business properties and caused $12,000,000 in damages. We are studying ways to protect the area from future storms. The reconnaissance study was started in October 1994 and reconnaissance report is scheduled for completion in September 1995. Fiscal Year 1996 funds of $26,000 will be used to complete the reconnaissance phase of the study in December 1995. The New York State Department of Environmental Conservation is the potential local sponsor.

SOUTH SHORE OF STATEN ISLAND, NY

The South Shore of Staten Island, NY, regularly suffers damage and erosion from major storms like the one that struck in December 1992. The survey covers about 13 miles of the coastline along lower New York Bay and Raritan Bay from Fort Wadsworth to Tottenville. We are studying ways to protect the area from future storms. The reconnaissance study was started in July 1994 and reconnaissance report is scheduled of completion in June 1995. Our Fiscal Year 1996 request of $30,000 will be used to complete the reconnaissance phase of the study in December 1995.

YONKERS SHORELINE

Flooding is a major problem in the area of Yonkers, NY. We are studying the feasibility of providing storm and flood damage reduction measures and erosion control measures along 4.5 miles of the eastern bank of the Hudson River. We are requesting $332,000 in Fiscal Year 1996 to complete the reconnaissance phase of our study. The reconnaissance study is scheduled to start in June 1995. The reconnaissance report is scheduled for completion in May 1996.

CHESAPEAKE BAY TIME VARIABLE MODEL, MD, VA, PA & DC

In 1987, the Secretary of the Army and the Environmental Protection Agency developed a time variable three dimensional model of the Chesapeake Bay to study ways to protect and restore the Bay. Population growth and changes in land use along the Bay's tributaries have necessitated studies of these tributaries. We are requesting $335,000 in Fiscal Year 1996 to complete the hydrodynamic model and continue the tributary-specific water quality processes and calibrations. The overall study is scheduled for completion in September 1997.

EASTERN SHORE, ACCOMACK AND NORTHAMPTON COUNTIES, VA

The Eastern Shore of Virginia, consisting of Accomack and Northampton Counties, is rich in water resources. It is subject to extensive damages from northeasters and hurricanes, and in need of navigational improvements. Requested funds of 248,000 will allow us to conduct a reconnaissance study to determine ways to minimize storm damage and improve navigation. The reconnaissance study is scheduled to start in April 1995. The reconnaissance report is scheduled to be completed in March 1996.

JENNINGS RANDOLPH LAKE MD & WV - REALLOCATION

Increasing population and economic growth have placed extreme demands on the water resources of the Potomac River Basin. Additional storage at Jennings Randolph Lake can alleviate some of these demands. A feasibility study is investigating reallocating about 5,000-10,000 acre feet of storage. The reconnaissance phase was completed in December 1989. The local sponsor is the State of Maryland. Our Fiscal Year 1996 request of $200,000 will be used to continue the feasibility phase of the study, which is scheduled for completion in April 1997.

PRECONSTRUCTION ENGINEERING AND DESIGN

Our General Investigations' Program also includes $9,488,000, together with a programmed carryover from Fiscal Year 1995 of $24,000, provides a total program of $9,512,000, for 11 preconstruction engineering and design projects in Fiscal Year 1996. Four are being completed and seven are continuing. These projects and amounts requested in Fiscal Year 1996 are listed, by state, in the following table:

FISCAL YEAR 1996 CIVIL WORKS PRECONSTRUCTION ENGINEERING AND DESIGN PROGRAM (PED)

States and Projects	FY 1996 Federal Requests Amount	FY 1995 Programmed Carryover
DELAWARE		
Delaware River Main Channel Deepening, DE, NJ, & PA	$780,000	$ 0
DISTRICT OF COLOMBIA		
Washington, DC & Vicinity	$200,000	$ 0
MARYLAND		
Baltimore Harbor Anchorages and Channel, MD & VA	$ 50,000	$ 0
Anacostia River and Tributaries, MD & DC	$1,100,000	$ 0
NEW JERSEY		
New York Harbor and Adjacent Channels, Claremont Terminal	$400,000	$ 0
Lower Saddle River, Bergen County	$963,000	$ 0
Raritan River Basin, Green Brook Sub-Basin	$3,600,000	$ 0
NEW YORK		
Arthur Kill Channel, Howland Hook Marine Terminal, NY & NJ	$400,000	$ 0
Long Beach Island	$525,000	$ 0

FISCAL YEAR 1996 CIVIL WORKS PRECONSTRUCTION ENGINEERING AND DESIGN PROGRAM (PED)

States and Projects	FY 1996 Federal Requests Amount	FY 1995 Programmed Carryover
VIRGINIA		
Sandbridge, Virginia Beach	$470,000	$ 24,000
Atlantic Intracoastal Waterway Bridge at Great Bridge	$1,000,000	$ 0
Total PED (11)	$9,488,000	$ 24,000

DELAWARE RIVER MAIN CHANNEL DEEPENING, DE, NJ, & PA

The Delaware River Main Channel Deepening, DE, NJ, and PA, project involves deepening the present 40 foot project to 45 feet from Delaware Bay to the Port of Philadelphia, widening bends, and deepening Marcus Hook Anchorage. We are requesting $780,000 in Fiscal Year 1996 to complete the design memorandum and appropriate NEPA documents, and to start preparation of plans and specifications. This project is authorized for construction by the Water Resources Development Act of 1992. The project sponsor is the Delaware River Port Authority. This effort is scheduled for completion in December 1996.

BALTIMORE HARBOR ANCHORAGES AND CHANNELS, MD AND VA

The Baltimore Harbor Anchorages and Channels, MD and VA, project addresses the need to improve an existing Federal anchorage area, dredge a new branch channel to South Locust Point, and widen the existing branch channels to Seagirt and Dundalk terminals. Our request of $50,000 will be used to continue into the preconstruction engineering and design. A completion date is being determined for this preconstruction engineering and design effort.

NEW YORK HARBOR AND ADJACENT CHANNELS, CLAREMONT TERMINAL, NJ

The New York Harbor and Adjacent Channels, Claremont Terminal, NJ, project will deepen the 27 foot channel to 34 feet below mean low water. The entrance channel will be 1,250 feet wide at the confluence with the New York Harbor Anchorage Channel, then taper to 300 feet extending approximately 1.6 miles. A maneuvering area will also be provided. Our Fiscal Year 1995 request of $400,000 will be used to continue preconstruction engineering and design. The potential local sponsor for the project is the Port Authority of New York and New Jersey. This project, authorized for construction by the Water Resources Development Act of 1986, is scheduled for completion in April 1997.

ARTHUR KILL CHANNEL, HOWLAND HOOK MARINE TERMINAL, NY & NJ

We are widening, deepening and realigning the Arthur Kill Channel, NY and NJ, in the area of the Howland Hook Marine Ocean Terminal to improve navigational safety and to accommodate larger modern vessels. The potential local sponsor for the project is the Port Authority of New York and New Jersey. This project is authorized for construction by the Water Resources Development Act of 1986. Our Fiscal Year 1996 request of $400,000 will continue preconstruction engineering and design. A completion date is being determined for this preconstruction engineering and design effort.

ATLANTIC INTRACOASTAL WATERWAY BRIDGE AT GREAT BRIDGE, VA

The Atlantic Intracoastal Waterway Bridge at Great Bridge, VA, is seriously overloaded, now carrying double its design capacity in vehicles each day. This overloading is also affecting navigation because of restrictions on bridge openings. A feasibility report, completed in Fiscal Year 1994, recommended replacing the existing bridge with a bigger, modern one. The City of Chesapeake is the local sponsor. Our request of $1,000,000 will complete preconstruction engineering and design. This effort is scheduled for completion in September 1996.

LONG BEACH ISLAND, NY

Long Beach Island, NY, is vulnerable to direct wave attacks during storms. Three major storms have hit the area in the past 10 years, six in the past 40 years. Our recommended plan will raise the beach berm, reconstruct the dune, rehabilitate existing groins and periodically nourish the beach. The project sponsor is the New York State Department of Environmental Conservation. Our request of $525,000 will continue preconstruction engineering and design, currently scheduled for completion in August 1997.

SANDBRIDGE, VIRGINIA BEACH, VA

Sandbridge is in the southeastern section of the City of Virginia Beach, VA. It is very vulnerable to direct wave attacks during storms and hurricanes. We will build a beach berm with an average width of 50 feet and periodically nourish the beach at two year intervals. The project is authorized by the Water Resources Development Act of 1992. The City of Virginia Beach, VA, is the potential local sponsor. Carryover funds from Fiscal Year 1994 are being used to continue preconstruction engineering and design in Fiscal Year 1995. Our request of $470,000, together with a programmed carryover of $24,000, will complete preconstruction engineering and design, scheduled for completion in September 1996.

WASHINGTON, DC AND VICINITY

Washington, DC, is flooded from both the Potomac River and Chesapeake Bay. Floods have caused loss of lives, damaged property, and disrupted businesses, government operations and transportation systems in the nation's capital. Our project will consist of a wall and levee system between the Lincoln Memorial and the Washington Monument, raising a section of P Street, all to protect the downtown Washington area; and a wall and levee system to protect Andrews Naval Air Station and Bolling Air Force Base. Fiscal Year 1996 funds of $200,000 will be used to complete preconstruction engineering and design including the general design memorandum and plans and specifications. This project is authorized by the Flood Control Act of 1936. The local sponsor is the National Park Service. This effort is scheduled for completion in September 1996.

ANACOSTIA RIVER AND TRIBUTARIES, MD & DC

The $1,100,000 requested for the Anacostia River and Tributaries, MD and DC, will continue preconstruction engineering and design on a project to construct wetlands, remove blockages to fish passage, and improve fish and wildlife habitat. Potential local sponsors are the State of Maryland, the District of Columbia, Prince George's County, and Montgomery County. Preconstruction engineering and design is scheduled to be completed in December 1996.

LOWER SADDLE RIVER, BERGEN COUNTY, NJ

Major flooding in recent years has adversely affected residential, commercial and industrial establishments along the Lower Saddle River, Bergen County, NJ. Our project will modify channels to protect those establishments from flooding. The Water Resources Development Act of 1986 authorized the project for construction. The State of New Jersey is the potential project sponsor. We are requesting $963,000 to complete preconstruction engineering and design, which is scheduled for completion in September 1996.

RARITAN RIVER BASIN, GREEN BROOK SUB-BASIN, NJ

In 1973, a major storm caused six deaths and more than $25,000,000 in damages in the Raritan River Basin, Green Brook Sub-Basin, NJ. This would be nearly $86,000,000 at October 1994 prices. A feasibility report completed in 1980 recommended building floodwalls and levees along Green Brook and its tributaries, and making other improvements, to protect the area. The Water Resources Development Act of 1986 authorized the project for construction. The project sponsor is the New Jersey Department of Environmental Protection. We are requesting $3,600,000 to continue the design and complete the general reevaluation report. Preconstruction engineering and design is scheduled for completion in August 1997.

CONSTRUCTION, GENERAL

The Fiscal Year 1996 amount for Construction, General is $70,413,000. This request, along with the programmed Fiscal Year 1995 carryover of $26,132,000, provides a Federal program of $96,545,000, for eighteen budgeted construction projects. One project will be funded by its programmed carryover from Fiscal Year 1995. These funds, together with our local sponsors' cash contributions of $33,670,000 provides a total program of $130,392,000 to complete two projects and continue seventeen projects. The projects and amounts requested in Fiscal Year 1996 are listed, by state, in the following table:

FISCAL YEAR 1996 CIVIL WORKS CONSTRUCTION, GENERAL PROGRAM

States and Projects	FY 1996 Federal Funds	FY 1995 Federal Programmed Carryover	FY 1996 Non-Federal Cash Amount	FY 1996 Total Non-Federal Amount
DELAWARE				
Delaware Coast Protection	$ 0	$205,000	$ 0	$295,000
MARYLAND				
Chesapeake Bay Oyster Recovery	$230,000	$258,000	$162,000	$162,000
NEW JERSEY				
New York Harbor & Adjacent Channels, Port Jersey Channel	$550,000	$200,000	$ 0	$ 0
Salem River	$3,576,000	$ 0	$ 288,000	$1,244,000
Sandy Hook to Barnegat Inlet	$15,700,000	$9,400,000	$16,060,000	$24,060,000
Molly Ann's Brook	$ 3,750,000	$3,259,000	$721,000	$2,265,000
Ramapo River at Oakland	$ 70	$ 0	$ 0	$685,000
NEW YORK				
New York Harbor Collection and Removal of Drift, NY & NJ	$100,000	$3,475,000	$1,270,000	$3,170,000

FISCAL YEAR 1996 CIVIL WORKS CONSTRUCTION, GENERAL PROGRAM

	FY 1996 Federal Funds	FY 1995 Federal Programmed Carryover	FY 1996 Non-Federal Cash Amount	FY 1996 Total Non-Federal Amount
NEW YORK				
East Rockaway Inlet to Rockaway Inlet & Jamaica Bay	$6,100,000	$5,800,000	$6,010,000	$6,010,000
Fire Island Inlet to Montauk Point	$10,400,000	$180,000	$4,841,000	$4,841,000
North Ellenville (Deficiency Correction)	$4,015,000	$ 0	$ 0	$ 0
PENNSYLVANIA				
Lackawanna River, Olyphant	$240,000	$400,000	$ 0	$ 0
Lackawanna River, Scranton	$357,000	$255,000	$336,000	$366,000
Wyoming Valley, (Levee Raising)	$4,300,000	$ 0	$1,560,000	$6,190,000
VIRGINIA				
Norfolk Harbor and Channels (Deepening)	$600,000	$600,000	$ 0	$ 0
Virginia Beach, VA (Reimbursement)	$925,000	$ 0	$485,000	$485,000
James R. Olin Flood Control Project	$7,400,000	$ 0	$1,150,000	$2,390,000
WEST VIRGINIA				
Moorefield	$4,200,000	$900,000	$ 0	$2,170,000
Petersburg	$7,900,000	$1,200,000	$ 0	$2,990,000
Total CG (19)	$70,413,000	$26,132,000	$32,883,000	$57,323,000

NEW YORK HARBOR & ADJACENT CHANNELS, PORT JERSEY CHANNEL, NY

We are widening and deepening the Port Jersey channel to accommodate the larger modern vessels. This project is authorized by the Water Resources Development Act of 1986. The Port Authority of New York and New Jersey is the potential project sponsor. Our request of $550,000, together with the programmed carryover of $200,000 will continue our efforts on dredge material disposal and planning, engineering and design. A completion date for this project is being determined.

SALEM RIVER, NJ

The Salem River is a tributary of the Delaware River, located approximately 50 miles southwest of Philadelphia. We are widening and deepening the channel, providing a turning basin, and partially realigning the channel for safety and cost reduction reasons. This project is authorized by the Water Resources Development Act of 1986. The South Jersey Port Corporation is the potential project sponsor. We will complete construction in June 1996 with the requested funds of $3,576,000.

NEW YORK HARBOR COLLECTION AND REMOVAL OF DRIFT, NY AND NJ

The New York Harbor Collection and Removal of Drift, NY and NJ, project will continue removing derelict vessels, and disposing of or replacing deteriorated shore structures. The states of New York and New Jersey are the local sponsors. This project is authorized by the Water Resources Development Act of 1974 as modified. Our request of $100,000, together with the programmed carryover of $3,475,000, will complete construction of the Weehawken to Edgewater 2A Reach, NJ, in September 1995, and continue construction of the Brooklyn 2A Reach, NY, scheduled for completion in March 1997. A completion date is being determined for the seven additional reaches.

NORFOLK HARBOR AND CHANNELS (DEEPENING), VA

We are deepening the navigation channels within the 25 square mile natural harbor serving the ports of Norfolk, Newport News, Portsmouth, Chesapeake, and Hampton, VA, to accommodate larger ocean going vessels. Providing deeper channels will assure that this port remains a major coal and grain exporting point. The Norfolk Harbor and Channels (Deepening), VA, project is authorized by the Water Resources Development Act of 1986. The requested funds of $600,000, together with programmed carryover of $600,000, will continue planning, engineering and design of the Elizabeth River Southern Branch channel improvements and the anchorage area. The Commonwealth of Virginia is the local sponsor. A completion date is being determined for this project.

DELAWARE COAST PROTECTION

The Delaware Coast Protection, DE, project is authorized by the Flood Control Act of 1968 as modified by the Water Resources Development Act of 1986. The programmed carryover of $205,000 will reimburse the State of Delaware for the Federal share of the periodic nourishment of the shoreline along the Delaware Coast, north of Indian River Inlet. A completion date is being determined for this project.

SANDY HOOK TO BARNEGAT INLET, NJ

The Sandy Hook to Barnegat Inlet, NJ, project consists of improvements to two sections of beach along the New Jersey shore. Erosion has seriously reduced the width of these beaches and exposed the shore to storm damage. The State of New Jersey is the local sponsor. This project is authorized by the River and Harbor Act of 1958 as modified by the Water Resources Development Acts of 1986 and 1988. The $15,700,000 requested, together with the programmed carryover of $9,400,000, will continue construction of the Sea Bright to Ocean Township Section and start construction of the Asbury Park to Manasquan Section. The initial beachfill at the Sea Bright to Ocean Township Section is scheduled to be completed in January 1996. The nourishment of the beach is being determined.

EAST ROCKAWAY INLET TO ROCKAWAY INLET AND JAMAICA BAY, NY

Our project at East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, is located in Brooklyn, Queens, and Nassau County, NY. This project is authorized by the Water Resources Development Act of 1974 as modified by the Water Resources Development Act of 1986. We are requesting $6,100,000, together with the programmed carryover of $5,800,000, will continue nourishment of the beach. The New York State Department of Environmental Conservation is the local sponsor. The nourishment cycle is scheduled for completion in October 1996. Completion dates are being determined for the next two nourishment cycles.

FIRE ISLAND INLET TO MONTAUK POINT, NY

The Fire Island Inlet to Montauk Point, NY, project provides beach erosion control and hurricane protection along five reaches of the Atlantic coast. We are studying the need to widen the beaches, raise the dunes and nourish the beach. The project area suffered major damage during the 11 December 1992 storm. The Westhampton area, was especially hard hit. This project is authorized by the River and Harbor Act of 1962 as modified by the Water Resources Development Acts of 1974, 1986, and 1992. The New York State Department of Environmental Conservation is the local sponsor. We are requesting $10,400,000, and together with the programmed carryover of $180,000, will start construction of the Westhampton Interim project, and continue reformulation efforts along the five reaches of the coast. The Westhampton Interim project is scheduled for completion in April 1997. A completion date is being determined for the entire project.

VIRGINIA BEACH, VA (REIMBURSEMENT)

Our existing project at Virginia Beach, VA, from Rudee Inlet to 49th Street, provides shoreline protection for approximately 3 1/3 miles of commercially developed publicly owned beach along the Atlantic coast of Virginia. This project is authorized by the River and Harbor Act of 1962 as modified by the Water Resources Development Act of 1986. The request of $925,000 will reimburse local interests for the Federal share of the periodic nourishment they provide in this area. The project is scheduled for completion in February 1997.

MOLLY ANN'S BROOK, NJ

Our project at Molly Ann's Brook is located in Haledon, Prospect Park, and Paterson, NJ, about 12 miles from New York City. We are modifying the channel for 2.5 miles. The modifications include both trapezoidal and walled sections. We will also replace five bridges and remove one building. This project is authorized by the Water Resources Development Act of 1976 as modified by the Water Resources Development Act of 1986. We will continue construction with the Fiscal Year 1996 request of $3,750,000 and the programmed carryover of $3,259,000. The State of New Jersey is the local sponsor. A completion date is being determined for this project.

RAMAPO RIVER AT OAKLAND, NJ

Our Ramapo River at Oakland, NJ, project extends from the Pompton Lake Dam upstream to West Oakland Avenue in Oakland. The project area has a history of flooding, with more than $1 million in annual flood damages. We will install flood control gates on Pompton Lake Dam, widen and deepen the channel, and create wetlands to lessen flood damages. Our Fiscal Year 1996 request of $70,000 will continue planning, engineering and design of the flood diversion structure and channel modification. The State of New Jersey is the local sponsor. A completion date is being determined for this project.

NORTH ELLENVILLE, NY (DEFICIENCY CORRECTION)

Several recent severe storms have seriously weakened the flood control project at North Ellenville, NY. We will repair, reinforce, or replace undermined floodwalls; place riprap along the banks of Beer Kill channel; repair and replace grout bags along the levees; and remove the rock outcrop to reduce erosive stream flow velocities. This project is authorized by the Flood Control Act of 1962 as modified by the Water Resources Development Act of 1990. The New York State Department of Environmental Conservation is the local sponsor. The $4,015,000 requested will be used to complete construction in November 1996.

LACKAWANNA RIVER, OLYPHANT, PA

The Lackawanna River, Olyphant, PA, flood control project includes levees and floodwalls to protect the Borough of Olyphant, PA. The Water Resources Development Act of 1992 authorized the project for construction. The Borough of Olyphant, PA, is the project sponsor. Preconstruction engineering and design was completed in November 1994. We are requesting $240,000 in Fiscal Year 1996, and together with the programmed carryover of $400,000, will continue planning engineering and design. A completion date is being determined of this project.

LACKAWANNA RIVER, SCRANTON, PA

The Lackawanna River, Scranton, PA, flood control project includes levees and floodwalls to protect Scranton, PA. The Water Resources Development Act of 1992 authorized the project for construction. The City of Scranton, PA is the project sponsor. The $357,000 requested for Fiscal Year 1996, together with the programmed carryover of $255,000, will be used to continue planning, engineering and design. Preconstruction engineering and design was completed in November 1994. A completion date is being determined of this project.

WYOMING VALLEY (LEVEE RAISING), PA

The Wyoming Valley is vulnerable to flooding. A recurrence of Tropical Storm Agnes today would cause $2 billion in damages. Our Wyoming Valley (Levee Raising), PA, project will raise levees and floodwalls three to five feet, modify closure structures, relocate utilities, and build new floodwalls and levees to maintain the system's integrity. The Water Resources Development Act of 1986 authorized the project for construction. The project sponsor is the Commonwealth of Pennsylvania. The $4,300,000 requested will start construction. A completion date is being determined of this project.

JAMES R. OLIN FLOOD CONTROL PROJECT, VA

The James R. Olin Flood Control Project, VA, will provide a system of levees and floodwalls along the left bank of the Maury River and channel modifications to protect the City of Buena Vista, VA, from flooding. The City suffered major flooding during storms in 1936, 1969, and 1985. The 1969 flood of record would cause over $61,000,000 in damages today. This project is authorized by the Water Resources Development Act of 1990. The City of Buena Vista, VA, is the project sponsor. The requested $7,400,000 will be used to continue construction. The lower element of the project is scheduled for completion in September 1997. Completion dates are being determined for the upper element and the entire project.

MOOREFIELD, WV

In 1985, Tropical Storm Juan killed three people and caused $29,100,000 in damages to Moorefield, WV. We will build a levee system to protect the town. The project is authorized for construction by the Water Resources Development Act of 1990. The Town of Moorefield, WV, is the project sponsor. Fiscal Year 1996 funds of $4,200,000, together with the programmed carryover of $900,000, will continue relocations, levee construction, and fish and wildlife mitigation. The project is scheduled for completion in September 1997.

PETERSBURG, WV

Petersburg, WV, was devastated by floods from Tropical Storm Juan in 1985 causing $28,200,000 in damages. Our project consists of earth levee, floodwall, channel improvement, highway bridge modifications, and environmental mitigation to protect the city. This project is authorized for construction by the Water Resources Development Act of 1990. Grant County, WV, is the local sponsor. Our request of $7,900,000, together with the programmed carryover of $1,200,000, will continue relocations, levee construction, and fish and wildlife mitigation. The project is scheduled for completion in August 1997.

CHESAPEAKE BAY OYSTER RECOVERY, MD

The Maryland oyster population has declined dramatically since the turn of the century, mainly because of MSX and Dermo, two parasitic diseases. This is affecting water quality in the Chesapeake Bay and also causing a collapse in the Maryland oyster industry. Our Chesapeake Bay Oyster Recovery project will restore physical oyster habitat and improve and maintain water quality. This project is authorized for construction by the Water Resources Development Act of 1986. We are requesting $230,000, together with the programmed carryover of $258,000, will be used to continue planning, engineering and design for this project. A completion date is being determined for this project.

OPERATION AND MAINTENANCE, GENERAL BUDGET REQUEST

In Fiscal Year 1994, our performance for the Operation and Maintenance program was 105 percent of the total program. For Fiscal Year 1995, we are scheduling to place 99 percent of the total program. In addition, our program includes seven congressional adds and one budgeted item was deleted.

Corps project operation and maintenance is a vital activity in the northeast. The requested $157,505,000 will be used to operate and maintain 187 activities. Included in our request is $120,819,000 for maintenance at 61 channels and harbors projects, $25,729,000 flood control project maintenance and reservoir operation on 32 projects, and inspection of 86 completed projects. We are also requesting $10,957,000 for protection of navigation on 8 activities. These funds will let us maintain high priority projects.

CONCLUSION

Mr. Chairman, we are your United States Army Corps of Engineers working to make a better natural and human environment for our densely populated region. Our vision is to be the team of choice. This concludes my overview of the North Atlantic Division's Fiscal Year 1996 total program of $275,406,000. I will be pleased to answer any questions you or other distinguished members of your subcommittee may have.

Thank you.

US Army Corps of Engineers
North Atlantic Division
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New York, New York 10007
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BG Milton Hunter
Commander and Division Engineer

Brigadier General Milton Hunter became Commanding General and Division Engineer of the North Atlantic Division 22 September 1994. Previously, he was Commanding General and Division Engineer of the South Pacific Division.

General Hunter is a 1967 Architectural Engineering and distinguished military graduate of Washington State University. He also holds an MS in Engineering (Construction Management) from the University of Washington and an Associate of Science in Engineering from Compton College. He completed the Engineer Officer Basic and Advanced Courses, the Command and General Staff College, the Army War College, the Executive Development Program, Darden School of Business Administration, University of Virginia, and the Construction Executive Program, Texas A&M University

Previous assignments with the Corps of Engineers included Chief of Staff, U. S. Army Corps of Engineers, Washington, D C Commander and District Engineer, Seattle District; as Assistant Director of Civil Works, Central Region, Directorate of Civil Works; and as Deputy District Engineer, Charleston Engineer District. He served as a program analyst in the Directorate of Program Analysis & Evaluation, Office of the Chief of Staff, Army, in the 339th Engineer Battalion (Construction) at Fort Lewis, Washington, as Executive Officer & Company Commander with Headquarters and Headquarters Company, 937th Engineer Group (Combat), 18th Engineer Brigade, Vietnam; as Assistant Division Engineer of the 12th Engineer Combat Battalion, 8th Infantry Division (Mechanized) at Bad Kreuznach, West Germany; and as Commander of the 79th Engineer Combat Battalion (Heavy), 18th Engineer Brigade at Karlsruhe, West Germany.

Other assignments include assignment was as the Director of Engineering & Housing for the Bad Kreuznach Military Community, West Germany; Operations Officer at the U S. Army Command and General Staff College at Fort Leavenworth, Kansas; as Personnel Management Officer, U. S Army Military Personnel Center in Alexandria, Virginia; as Test Project Officer for the Ribbon Ridge Project, U. S Army Armor & Engineer Board at Fort Knox, Kentucky; and as an Instructor, Tactical Bridging Branch, Department of Applied Engineering, U S. Army Engineer School, Fort Belvoir, Virginia.

General Hunter served as a Military Social Aide to the White House and was selected as one of the "Outstanding Young Men of America" in 1979. He was presented the 1991 Distinguished Alumni Award from his alma mater, Washington State University.

Among his military decorations are the Legion of Merit with Oak Leaf Cluster, the Bronze Star Medal, the Meritorious Service Medal with Oak Leaf Cluster, Army Commendation Medal with Oak Leaf Cluster, Meritorious Unit Citation, Army General Staff Identification Badge, and Parachutist Badge

He is a member of Tau Beta Pi, the National Engineering Society, the Association of the United States Army, and is a Fellow in the Society of American Military Engineers.

A native of Houston, Texas, General Hunter is married to the former Karina Bechtle of Pforzheim, Germany. They have two sons: Alexander and Patrick.

The North Atlantic Division oversees District offices in New York, Philadelphia, Baltimore and Norfolk. It has civil works responsibilities in the Hudson, Delaware, Potomac, Susquehanna and James River basins and coastal areas The division's military responsibilities are in the northeastern United States, Greenland and eastern Canada

[Clerk's note.—The justification sheets for the North Atlantic Division follow:]

Justification of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

NORTH ATLANTIC DIVISION

Corps of Engineers

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Justification of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

SUMMARY, NORTH ATLANTIC DIVISION

	FY 1995 Allocation 1/ $	FY 1996 Request $	Increase or Decrease $
General Investigations			
Surverys	10,033,000	11,656,000	1,623,000
Preconstruction Engineering and Design	7,942,000	9,488,000	1,546,000
Subtotal General Investigations	(17,975,000)	(21,144,000) 2/	(3,169,000)
Construction, General			
Construction	79,438,000	70,413,000	-9,025,000
Major Rehabilitation	0	0	0
Dam Safety Assurance	0	0	0
Subtotal Construction, General	(79,438,000)	(70,413,000) 3/	(-9,025,000)
Operation and Maintenance, General			
Project Operations	37,610,000	39,066,000	1,456,000
Project Maintenance	96,232,500	118,439,000	22,206,500
Subtotal Operation and Maintenance	(133,842,500)	(157,505,000)	(23,662,500)
GRAND TOTAL, NORTH ATLANTIC DIVISION	231,255,500	249,062,000	17,806,500

1/ Energy and Water Development Appropriations Act, 1995, P.L. 103-316 (108 Stat. 1707)
2/ Excludes $212,000 in unobligated carryover from prior years that is being programmed for use in FY 1996.
3/ Excludes $26,132,000 in unobligated carryover from prior years that is being programmed for use in FY 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
1. SURVEYS - NEW					
a. Navigation Studies:					
MARYLAND					
Smith Island Environmental Restoration & Protection	450,000	0	0	300,000	150,000

Smith Island is Maryland's only inhabited offshore island and is an area rich in cultural and historical significance, having been settled by British colonists in the early 1700's. There are three towns on the island, each with a rustic working harbor, with hardy watermen who make their livelihood from oystering and crabbing. The island has undergone substantial loss and modification of its environmental resources, a portion of which may be attributable to Corps of Engineers projects. As key wetlands and intertidal areas are affected by the interaction of man and nature, the beneficial role that these resources play in flood damage reduction, erosion protection, and ecological diversity has been reduced. In the past 100 years, 1,200 acres of Smith Island have eroded into the Chesapeake Bay, and future erosion will destroy the island if left unchecked. The Corps of Engineers maintains navigation works for the island, all of which were formulated and constructed prior to today's recognition of fish and wildlife values The existing Federal navigation projects include: a channel from Twitch Cove to deep water in the Chesapeake Bay, with twin jetties at the entrance; an anchorage basin connecting with the west side of the channel at Ewell; an extension of the channel in Levering Creek; a channel from Tyler Creek to and including an anchorage basin at Tylerton; a channel from Shanks Creek to and including an anchorage basin at Rhodes Point; a channel from Big Thorofare to Tylerton; and a channel from Rhodes Point to Tylerton.

Many upland dredged material placement areas were created over wetlands. In all, an estimated 50 acres of habitat have been impacted. This study will investigate restoration of fish and wildlife habitat lost from previous construction activities and erosion control. Although erosion affects nearly all of Smith Island, none is as threatened as Rhodes Point. Hog Neck Peninsula is the only buffer between the Bay and the community of houses and crab shanties Erosion also is threatening public sewer facilities at Tylerton.

Potential non-Federal sponsors are the State of Maryland and Somerset County. The entities fully understand the cost sharing requirements for the feasibility phase of the study

Fiscal Year 1996 funds will be used to initiate a reconnaissance phase study at full Federal expense to determine the need for detailed studies in the feasibility phase. The reconnaissance report is scheduled to be completed in November 1996, which is 12 months after initiating the study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NEW YORK					
Mattituck Harbor	400,000	0	0	250,000	150,000

The study area is located near the eastern end of the north fork of Long Island, opening into long Island Sound through an inlet which is stabilized by two jetties. An existing Federal project in the study area provides for a channel, 7 feet deep at MLW and 150 feet wide at the entrance and 80 feet wide thereafter, and a 460 foot by 570 foot anchorage area at the upper end of the channel. The project also provides for two parrallel jetties at the entrance channel. The total length of the project is approximately 2.2 miles.

Local interests have expressed concern about inadequate depths, which have restricted commercial vessel usage of the waterway. These restrictions can result in navigation hazards, arising from unsafe practices, as well as costly delays to vessels that must time their passage with high tide. Commercial fish landings were reported to be valued at 2.6 million in 1990.

The study will determine whether improvements to the existing Federal navigation channel are economically and environmentally justified In addition, the reconnaissance phase study would consider the beneficial use of material that would be dredged from the channel. There is strong local interest in improving navigation within Mattituck Harbor. The New York State Department of Environmental Conservation supports the study and has indicated its willingness to cost-share the feasibility phase

Fiscal Year 1996 funds will be used to initiate the reconnaissance phase at full Federal expense to determine the need for detailed studies in the feasibility phase. The reconnaissance report is scheduled to be completed in March 1997, which is 12 months after initiating the study.

b. Flood Damages Prevention Studies: None

c. Shoreline Protection Studies: None

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
d. Special Studies:					
MARYLAND					
Anacostia River Federal Facilities Impact Assessment, MD & DC	600,000	0	0	300,000	300,000

The Anacostia River watershed extends through portions of Maryland and the District of Columbia. The watershed is 170 square miles in size and is highly urbanized. As a result of the Federal Government's development in the Washington region, substantial lands in the Anacostia watershed are in Federal ownership More than 15 Federal facilities, owned by numerous agencies, encompass about 25 square miles or 15 percent of the Anacostia watershed. Consequently, the Federal Government has the opportunity to play a major role in regional environmental initiatives. In Section 114(d) of the Water Resources Development Act of 1992, Congress directed the Secretary of the Army to carry out a comprehensive assessment of the adverse watershed impacts from Federal facilities and to review the current plans for reducing such adverse impacts in the Anacostia basin. This assessment will address the potential for several types of environmental restoration, including terrestrial habitat restoration, aquatic habitat restoration, creation of wetland habitat, and sediment/stormwater control, at the specific Federal facilities. It is expected that these projects would be creative, cost-effective measures that would be in consonance with other Federal, state, and local activities underway in the watershed.

There is a strong ongoing program in the Anacostia River watershed to restore fish and wildlife habitat, promote good environmental practices, and implement many environmental restoration projects. This program was initiated by a regional agreement in 1987 and is led by the multi-jurisdictional Anacostia Watershed Restoration Committee. Support for this study extends across local, state, and regional agencies, as well as at the national level.

Fiscal Year 1996 funds will be used to initiate the comprehensive assessment at full Federal expense. The assessment report is scheduled to be completed in June 1997, which is 18 months after initiating the assessment.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Lower Eastern Shore, MD & DE	500,000	0	0	250,000	250,000

The study addresses the lower eastern shore of the Chesapeake Bay in Maryland. Three main rivers (Choptank, Nanticoke, and Pocomoke) flow into the Bay in this area, as do numerous smaller creeks. The drainage area is approximately 2,000 square miles. The Corps of Engineers has constructed over 50 navigation and erosion control projects in this area Many of these projects were formulated and constructed prior to today's recognition of fish and wildlife values. For several projects, such as Broad Creek and the Pocomoke River, navigation channels were straightened and widened through wetlands. In many areas, upland dredged material placement areas were created over wetlands

Areas of the basin which were once considered remote and of low value are now encountering development In this rapidly growing area, an ecosystem study is needed to develop an effective and comprehensive approach for supporting state and local governments in providing integrated watershed planning, management, and regulation. The study will develop a wide range of natural resource management strategies which are responsive to local and regional ecological and economic factors through application of traditional water resource analytical tools. A comprehensive approach to this watershed would integrate all planning, construction, management, and regulatory actions while giving consideration to a full range of economic and environmental values and purposes. Methods to be evaluated include wetland restoration, retention structures, riparian corridor restorations, beneficial uses of dredged material, fish and wildlife habitat restoration including related water quality improvements, and other environmental restoration associated with ensuring reasonable development within the watershed. The watershed study would provide a basis on which the Corps could issue general permits to focus development in areas of lesser environmental value and require restoration of dredged wetlands and mitigation for the permitted activities. Potential sponsors include the State of Maryland and Talbot, Caroline, Dorchester, Wicomico, Somerset and Worcester Counties.

Fiscal Year 1996 funds will be used to initiate the reconnaissance phase at full Federal expense. The reconnaissance report is scheduled to be completed in April 1997, which is 12 months after initiating the study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Stony Brook, Princeton Township, NJ	400,000	0	0	250,000	150,000

The study area is the Stony Brook basin in the vicinity of Princeton Township, NJ. Stony Brook is the largest tributary to the Millstone River, which drains into the Raritan River and is located in Mercer County, NJ. Princeton Township and the State of New Jersey Department of Environmental Protection, (DEP), have indicated strong support for a Corps of Engineers study of water resources problems, needs and opportunities in the watershed. The State of New Jersey DEP is most likely to be the non-Federal sponsor. Possible recommended plans from this multiobjective watershed study include urban flood damage prevention projects at various locations in the study area, fish and wildlife restoration (environmental enhancement), wetland restoration, water supply, erosion control, low flow augmentation, and recreational outputs. It is recognized by local, State, and Federal water managers that interagency cooperation is needed to define and implement effective comprehensive watershed management methods and programs to reduce flood damages and improve water quality. Methods to be evaluated include wetland restoration, retention structures, riparian corridor restorations, and other environmental restoration associated with ensuring reasonable development within the watershed The watershed study would provide a basis on which the Corps would issue general permits to focus development in low value wetlands and require restoration of degraded wetlands as mitigation for the permitted activities. There is currently permit activity in the watershed (10 permit activities per year). The study area has experienced significant population growth, which is expected to continue. From 1954 through 1992, fifty-six flood events have been recorded at the Stony Brook gauge in Princeton, NJ. The largest flood event occurred during Hurricane Doria in August 1971, which caused significant damages. The proposed study is multiple purpose and could integrate Federal, State and local efforts regarding urban flood damage prevention, enhanced flood warning system, and other important outputs including water quality, water supply/low flow augmentation, erosion control, environmental enhancement, and recreation.

Fiscal Year 1996 funds will be used to initiate a reconnaissance study. The reconnaissance report is scheduled to be completed in July 1997, which is 16 months after initiating the study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
VIRGINIA					
Nansemond River Basin, Suffolk	500,000	0	0	370,000	130,000

The watershed is located in the city of Suffolk in the Hampton Roads area of southeastern Virginia. The river is about 34 miles in length and has a drainage area of about 220 square miles. The lower portion of the river is tidal with a mean tide range of 2.8 to 3.8 feet and empties into the James River at the mouth. There is an existing small navigation project with a depth of 12 feet and a width of 100 feet. The upper portion of the river is non-tidal and includes 7 reservoirs plus 2 smaller lakes which provide the entire water supply for the cities of Suffolk and Portsmouth and contain 90 percent of the surface water supplies for the cities of Norfolk and Virginia Beach. Much of the river is in a natural environmental state. The population projections indicate increases on the order of 25 percent by the turn of the century and 60 percent by the year 2030 with most of that, and the supporting development pressure, expected to occur in the Nansemond River corridor. This demonstrates a need for evaluating the impacts of development on hydrology and the ecosystem since there will likely be a peak growth period in the future. In addition, a portion of the Great Dismal Swamp National Wildlife Refuge lies within Suffolk as well as many acres of surrounding wetlands.

The Hampton Roads area is the fastest growing area in Virginia, and the city of Suffolk has been identified as the next sector of Hampton Roads where current and future urban expansion is anticipated. Waterfront property is at a premium in Hampton Roads and Suffolk, including the Nansemond River. The area is accessible to the heavy employment areas of Norfolk, Portsmouth, Chesapeake, Virginia Beach, and the military bases via an integrated system of interstate highways and tunnels. Recent completion of the Monitor-Merrimac Bridge Tunnel provides immediate access to the cities of Newport News and Hampton. This is an area which would clearly benefit from a watershed planning effort. There are many opportunities for environmental restoration, including wetlands, fish and wildlife habitat restoration, and water quality improvements to support that habitat, which could be clearly identified and prioritized through a watershed management plan. Moreover, a watershed management plan could integrate Federal, state and local efforts to pursue multiple objectives, including flood damage prevention and environmental restoration, while providing for reasonable development of the area. The watershed study would provide a basis for the Corps issuing general permits that would minimize or avoid any impacts on wetland areas while making the approval of minor activities easier for the public. Restoration of degraded wetlands as mitigation for the permitted activities could be better managed. The watershed plan will also identify those areas that are generally unsuitable for development. By letter dated 8 October 1993, the city of Suffolk indicated their support for the study and their willingness to cost share in feasibility phase studies.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Nansemond River Basin, Suffolk					

Fiscal Year 1996 funds will be used to initiate the reconnaissance phase at full Federal expense. The reconnaissance study will focus on water related master planning for the watershed with opportunities for environmental, water supply, water quality, flood control, and navigation spinoffs into the feasibility phase. The reconnaissance report is scheduled to be completed in March 1997, which is 12 months after initiating the study.

e. Comprehensive Studies: None

f. Project Review Studies: None

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
2. SURVEYS - CONTINUING					
a. Navigation Studies:					
DELAWARE					
Chesapeake and Delaware Canal, Baltimore Harbor Connecting Channels (Deepening), DE & MD	2,615,000	2,277,000	251,000	57,000	30,000

The existing Federal navigation project for the Chesapeake and Delaware Canal provides for a channel 44 miles long, 35 feet deep and 450 feet wide from the Delaware River to deep water in the Chesapeake Bay off Pooles Island. The project includes Federal ownership of four bridges. The Baltimore Harbor connecting channels have a total length of 13 miles, and authorized depths of 35 feet and widths of 600 feet. These projects provide deep draft commercial channels for ships calling at Baltimore, Maryland, with a shortcut to and from Philadelphia, Pennsylvania, the northeast United States and Europe. The present canal dimensions were authorized in 1954 and the connecting channels were authorized in 1958, based on vessel characteristics and traffic levels which are now significantly exceeded. Almost 11,000 vessels transport 17 million tons of cargo through the canal annually. Substantial benefits from waterway improvements are likely to occur for commercial vessels, especially container, automobile and bulk (dry and liquid) carriers, by either transporting their cargoes in larger vessels or by reduced sailing time Alternative routes around the Delmarva Peninsula add up to 150 miles for each vessel trip.

The feasibility phase of the study is investigating navigation improvements for the canal and connecting channels including possible channel deepening from 35 feet to 40 feet below mean low water, widening, anchorage improvements, and refinement of traffic management. The Maryland Port Administration executed the feasibility cost sharing agreement on 31 August 1990.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study, including preparation of a draft feasibility report and Environmental Impact Statement. The funds requested for Fiscal Year 1996 will be used to complete the feasibility report and the Environmental Impact Statement. The estimated cost of the feasibility phase is

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Chesapeake and Delaware Canal, Baltimore Harbor Connecting Channels (Deepening), DE & MD					

$4,430,000, which is being shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost-sharing is as follows:

Total Estimated Study Cost	$4,830,000
Reconnaissance Phase (Federal)	400,000
Feasibility Phase (Federal)	2,215,000
Feasibility Phase (Non-Federal)	2,215,000

The reconnaissance phase was completed in August 1990. The feasibility study is scheduled for completion in September 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
MARYLAND					
Baltimore Harbor Anchorages and Channels, MD & VA	1,512,000	921,000	300,000	291,000	0

Baltimore Harbor and Channels extend from Baltimore, Maryland, on the Patapsco River, through the Chesapeake Bay to the Atlantic Ocean in Virginia. It also connects with the Delaware River through the Chesapeake and Delaware Canal. The reconnaissance phase concentrated on the 32-square-mile Patapsco River and tributaries portion of the existing Baltimore Harbor and Channels project. The existing 30 to 35-foot deep anchorage areas are not of sufficient depth, length and width to accommodate vessels now in operation, and anchorages for larger vessels are required Many vessels are required to anchor in Chesapeake Bay below the Bay Bridge. Anchoring at these areas results in lost travel time of about 25 miles to the port facilities when called to load or unload. An average of more than 4,000 ships annually use the port facilities The port's overall commerce, both foreign and domestic, consists of general and bulk cargo averaging about 41 million tons annually. The Maryland Port Administration has invested $500,000,000 to provide public terminals in the port and is planning to develop new public terminals. Improved or new branch channels are desired to increase the maneuverability of larger vessels, thus decreasing the time required to shift to and from berth.

The feasibility phase of the study is investigating expansion of one existing anchorage area, dredging of a new branch channel at South Locust Point, and widening of the existing branch channels at Seagirt and Dundalk terminals. The Maryland Port Administration executed the feasibility study cost sharing agreement on 21 May 1993

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study The funds requested in Fiscal Year 1996 will be used to complete the feasibility phase, including final report preparation. The estimated cost of the feasibility phase is $2,384,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,704,000
Reconnaissance Phase (Federal)	320,000
Feasibility Phase (Federal)	1,192,000
Feasibility Phase (Non-Federal)	1,192,000

The reconnaissance phase was completed in May 1993. The feasibility study is scheduled for completion in July 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Ocean City, MD & Vicinity Water Resources	3,239,000	599,000	279,000	850,000	1,511,000

The Town of Ocean City and adjacent areas of Worcester County, Maryland, including Ocean City Inlet, Assateague Island, and Chincoteague, Sinepuxent, Assawomman, and Island of Wight Bays are experiencing a variety of problems with their water resources. The problems are related to the presence of large populations and extensive development in a relatively small area which is subject to dynamic natural processes associated with coastal barrier islands and bays. The feasibility study will involve detailed investigations of the problems identified in the reconnaissance phase, including hurricane, storm and flood damages, difficulties with navigation, and loss of fish and wildlife habitat. Many of these problems will impact or are a result of local Corps projects. The Corps has constructed two jetties to stabilize the inlet and maintains navigation channels through the inlet and back bays. In addition, the Corps has constructed a hurricane protection project extending approximately eight miles along the Ocean City shoreline, involving a bulkhead, vegetated dunes, and beach replenishment. These two projects have affected the regional sediment transport system, contributing to downdrift erosion and shoaling in navigation channels. The reconnaissance report, prepared in May 1994, identified five feasible and environmentally acceptable projects for further investigation in the feasibility phase: restoration of Assateague Island; restoration of fish and wildlife habitat in the coastal bays; two commercial navigation projects to widen and deepen the Ocean City Harbor and Inlet and to implement a channel adjacent to the Ocean City Fishing Center; and long-term sand placement alternatives, including construction of a sand bypassing and/or backpassing plant. Many agencies have been involved with the study including: National Park Service, U.S. Fish & Wildlife Service, U.S. Environmental Protection Agency, Maryland Department of Natural Resources etc. Non-Federal sponsors are a combination of the State of Maryland, Worcester County, and the Town of Ocean City.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase, negotiate a feasibility cost-sharing agreement and develop an initial project management plan for the feasibility phase of the study. If the reconnaissance phase is certified according to policy, funds requested for Fiscal Year 1996 will be used to continue into the feasibility phase of the study, including data collection, detailed problem/opportunity definition, formulation of detailed project concepts, and public coordination. The preliminary estimated cost of the feasibility phase is $5,200,000 which will be cost-shared on a 50-50 percent basis with non-Federal sponsors. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost-sharing is as follows:

Total Estimated Study Cost	$5,839,000
Reconnaissance Phase (Federal)	639,000
Feasibility Phase (Federal)	2,600,000
Feasibility Phase (Non-Federal)	2,600,000

The reconnaissance phase is scheduled for completion in April 1995 A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NEW YORK					
Hudson River Habitat Restoration	950,000	236,000	114,000	350,000	250,000

The study area extends 155 miles from the southern limit of the State Barge Canal at Waterford, New York, to the Battery in New York City. The study will address the restoration of Fish and Wildlife resources.

The River and Harbor Act of 1910 authorized a 12 foot navigation channel for the Hudson River, New York -- New York City to Waterford. The project was modified by the River and Harbors Acts of 1935 and 1938, which authorized deepening of the channel to 32 feet to the Federal Lock at Troy New York, and 14 feet to the southern limit of the State Barge Canal at Waterford. Prior to this project, a series of low-profile dikes were constructed by the Corps to create a stable channel for deep-draft navigation between New York City and the Port of Albany, and barge traffic to the New York State Barge Canal System. Dredging the channels by the Corps over the past one hundred years has produced approximately 83,000,000 cubic yards of dredged material, which was disposed of in embayments, marshes, backwaters, and secondary channels behind islands. The dredged material was also used to construct new islands, extend and/or connect existing islands, filling in additional wetland and aquatic habitats Since 1891 approximately 2,800 acres of wetland and aquatic habitat have been lost and 60 miles of shallow habitat deepened. Striped bass, shad, atlantic sturgeon and herring use the wetland habitat for spawning and as a primary nursery during their critical developmental stages. The river also contains a rare stable population of the endangered shortnose sturgeon, and certain of the effected habitat is critical for its survival. The National Marine Fisheries Service, The U.S. Fish and Wildlife service, The Museum ofhe Hudson Highlands, the Nature Conservancy, the Audubon Society, Scenic Hudson, electric utilities and railroads desire habitat restoration.

The study will consider measures such as reestablishing wetlands and aquatic habitat, and removal of barriers to fish migration. Several potential wetland restoration sites identified by the Waterways Experiment Station will be investigated during the reconnaissance phase, including Schodak Landing, Stuyvesant and Rogers Island. By letter dated 2 April 1993, the NY State Department of Environmental Conservation and NY State Department of State have indicated their support for the study and their willingness to cost share in the feasibility phase of the study.

Fiscal Year 1995 funds will be used to complete the reconnaissance report, negotiate a feasibility cost-sharing agreement and develop an initial project management plan for the feasibility phase of the study. If the reconnaissance phase is certified according to policy, funds requested for Fiscal Year 1996 will be used to continue into the feasibilty phase. The cost of the feasibility phase is estimated to be $1,200,000, which is to be shared on a 50-50

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Hudson River Habitat Restoration					

basis between Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of cost sharing is as follows:

Total Estimated Study Cost	$1,550,000
Reconnaissance phase (Federal)	350,000
Feasibility phase (Federal)	600,000
Feasibility phase (Non-Federal)	600,000

The reconnaissance phase is scheduled for completion in September 1995. The Feasibility Study is scheduled for completion in September 1997.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Lake Montauk Harbor	900,000	231,000	169,000	195,000	305,000

The study area encompasses the Lake Montauk Harbor, which is located on the southern fork of the east end of Long Island, New York. Lake Montauk Harbor opens to the north into Block Island Sound through an inlet which is stabilized by two jetties. An existing Federal project in the study area provides for a channel, about 0.7 mile long, 12 feet deep at low water and 150 feet wide, a boat basin 10 feet deep, 400 feet wide and 900 feet long; and two jetties at the mouth of the harbor. Lake Montauk Harbor is used extensively by commercial and recreational fishing boats and provides a harbor of refuge, and a rescue base for the U.S. Coast Guard.

Local interests have expressed concern about inadequate channel depth for larger commercial vessels which pass through the inlet. Vessels with drafts exceeding the existing 12-foot design channel depth can only pass through the channel at high tide causing costly delays and potentially unsafe practices. In recent years, inlet maintenance has required more frequent dredging. The study will examine the causes of this problem, and will investigate ths relationship between the navigation project and erosion of the shore to the west of the inlet.

The feasibility phase of the study will investigate navigation improvements, including deepening and widening the existing channel. It will also investigate alternatives to reduce channel maintenance costs, and will address potential beneficial uses of the dredged material to reduce damages to the shoreline west of the inlet. The New York State Department of Environmental Conservation has indicated its support for the study and its willingness to cost share in the feasibility phase.

Fiscal Year 1995 funds are being used to complete the reconnaissance report and negotiate the feasibility cost sharing agreement and develop an initial project management plan for the feasibility phase of the study. If the reconnaissance report is certified to be in accord with policy, the funds requested for Fiscal Year 1996 will be used to continue into the feasibility phase of the study, including engineering and economic analyses and environmental baseline investigations. The preliminary estimated cost of the feasibility phase is $1,000,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$1,400,000
Reconnaissance Phase (Federal)	400,000
Feasibility Phase (Federal)	500,000
Feasibility Phase (Non-Federal)	500,000

The reconnaissance phase is scheduled for completion in October 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
New York Harbor Anchorage Areas	1,200,000	500,000	100,000	100,000	500,000

New York Harbor Anchorage Areas, a part of the New York Harbor and Adjacent Channels Project, includes three separate anchorage areas. Local interests desire that two of these areas, the Red Hook Flats and Gravesend Bay, be considered for navigation improvements. Red Hook Flats anchorage area is located west of Red Hook and Bay Ridge sections of Brooklyn, New York, and is approximately 3.6 miles long, 2,640 feet wide, and 35 to 45 feet deep. Gravesend Bay anchorage area is located northwest of the Coney Island peninsula, and is approximately 1.2 miles long, 2,112 feet wide, and 47 feet deep. The third anchorage area, Liberty Island, is located just east of Liberty Island, and is approximately 2.0 miles long, 2,112 feet wide, and 20 feet deep. The Liberty Island anchorage area holds smaller and fewer commercial vessels due to its location and shallower depth, and is reportedly not in need of improvement. The study is investigating additional deepwater anchorage areas which would reduce transportation costs, and overcrowding in the anchorages as well as in navigation channels.

A problem in the two areas, caused by increasing vessel size, is lack of space. In Red Hook Flats anchorage, insufficient depth is also a problem. The current design of the Red Hook Flats anchorage area was based primarily on vessels having a draft of 35 feet and a length of 525 feet. Recent investigations verify that there is a significant increase in vessels with drafts of 40 to 46 feet and lengths of approximately 1,000 feet. The larger vessels occupy more room in the anchorage areas, and with the increased size, the ships' maneuverability decreases which requires a greater clearance between the vessels. Thus, the existing anchorage areas can accommodate fewer ships. Vessels awaiting a space in the anchorage area can stay in other sheltered areas for a limited time before operating rules require that they must leave port and return for anchorage.

The State of New Jersey, the State of New York, and the Port Authority of New York and New Jersey are interested in improving the anchorage areas to make them more suitable for the increasing ship size and number of deep draft vessels. The improvements would reduce the risk of collisions and groundings including resultant petroleum spills. The Port Authority has indicated its willingness to cost-share the feasibility phase of the study.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase at full Federal expense and, if the reconnaissance report is certified to be in accordance with policy, continue into feasibility phase of the study. Fiscal Year 1996 funds will be used to continue feasibility phase including design, economic, and environmental studies.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
New York Harbor Anchorage Areas					

The estimated cost of the feasibility phase is $1,400,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$1,900,000
Reconnaissance Phase (Federal)	500,000
Feasibility Phase (Federal)	700,000
Feasibility Phase (Non-Federal)	700,000

The reconnaissance phase is scheduled for completion in July 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Raritan Bay Anchorages, New York and New Jersey Channels	1,200,000	410,000	100,000	100,000	590,000

Raritan Bay Anchorages, a part of the New York and New Jersey Channels Project, includes two separate anchorage areas. Local interests desire that the anchorages be considered for navigation improvements. The Perth Amboy Anchorage, located at the junction of the Raritan River, Arthur Kill and Raritan Bay, was authorized to depths ranging from 25 to 37 feet, a length of 1.0 mile, and a width of 1,800 feet. Sandy Hook Anchorage, due west of the tip of the Sandy Hook peninsula at the entrance to the Main Ship Channel, is 1.4 miles long, 1,600 feet wide, and 38 feet deep. The latter anchorage was never constructed. Recent investigations verify that there is a significant increase in commercial navigation vessels with drafts over 40 feet and lengths of approximately 1,000 feet entering the study area. The larger vessels occupy more room in anchorage areas and with the increased size, the ships' maneuverability decreases, thus requiring greater clearance between the vessels. Existing anchorages in the area can accommodate fewer vessels. Vessels awaiting a space in the anchorage area can linger only a short time before operating rules require that they must leave port and return for anchorage.

The study will determine the feasibility of constructing a Sandy Hook anchorage and additional anchorage areas, and improving the Perth Amboy anchorage. Improvements would reduce transportation costs, overcrowding, and the risk of collisions and groundings. Increased anchorage capacity could also be of significant strategic importance to the nearby Earle Naval Weapons Station. The Port Authority of New York and New Jersey has expressed support for the study and has indicated a willingness to cost share the feasibility phase of the study.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase at full Federal expense and, if the reconnaissance report is certified to be in accordance with policy, continue into feasibility phase of the study, including engineering, environmental and economic data gathering, and public involvement. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is $1,400,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$1,900,000
Reconnaissance Phase (Federal)	500,000
Feasibility Phase (Federal)	700,000
Feasibility Phase (Non-Federal)	700,000

The reconnaissance phase is scheduled for completion in July 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Reynolds Channel and New York State Boat Channel	1,250,000	276,000	204,000	170,000	600,000

The study area is located in the South Shore of Long Island in the Counties of Nassau and Suffolk, New York. Reynolds Channel is located in the bay area north of Long Beach Island, with outlets to the ocean through East Rockaway Inlet and Jones Inlet. The New York State Boat Channel continues eastward through the bays from Jones Inlet to a point near Captree Island and Oak Beach with outlets to the ocean through both Jones Inlet and Fire Island Inlet.

The existing channels have depths that restrict commercial trawlers and fishing vessels, which must lightload or only use the channels at high tide. Annual commercial fishing averages 9,500 tons Deepening channels and realignment would generate transportation savings.

The study will determine the feasibility of improving the existing channels, new channel cuts, and other alternatives In addition, the reconnaissance study will consider the beneficial uses of material that would be dredged from the channels. There is strong local interest in improving navigation through Reynolds Channel, and the New York State Boat Channel. The New York State Department of Environmental Conservation supports the study and by letter dated 23 February 1994 expressed a willingness to cost-share the feasibility phase.

Fiscal Year 1995 funds will be used to complete the reconnaissance report, negotiate a feasibility cost sharing agreement and development of an initial project management plan for the feasibility phase of the study. If the reconnaissance report is certified to be in accordance with policy, funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase and continue into the feasibility phase of the study including data collection for preliminary engineering, economic and environmental investigations. The estimated cost of the feasibility phase is $1,500,000 which is to be shared on a 50-50 basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of the study cost sharing is as follows:

Total estimated study cost	$2,000,000
Reconnaissance Phase (Federal)	500,000
Feasibility Phase (Federal)	750,000
Feasibility Phase (Non-Federal)	750,000

The reconnaissance phase is scheduled to be completed in November 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
b. Flood Damages Prevention Studies:					
MARYLAND					
Anacostia River and Tributaries, MD and DC	3,145,000	1,545,000	100,000	450,000	1,050,000

The Anacostia River has a total drainage area of 170 square miles, of which 136 square miles are in Maryland, and 34 square miles are in the District of Columbia. The Northeast and Northwest Branches originate in Maryland and flow through several highly urbanized areas before forming the Anacostia River about 9 miles upstream from its junction with the Potomac River. The Corps of Engineers involvement in the basin dates back more than 115 years and includes projects and programs for navigation, flood control, debris removal, and aquatic vegetation control. Two major projects were undertaken. From 1902 through 1940, the District of Columbia portion of the river was channelized, seawalls were built, Kingman Lake and East Lake were constructed, and more than 1,000 acres of mudflats and wetlands were filled with dredged material. The primary purpose of this work was to provide a park for the eastern portion of the city. From 1952 to 1959, a flood control project was constructed in Prince George's County, Maryland, along the Northeast and Northwest Branches and the Anacostia River. A total of 28,000 feet of levees and 14,000 feet of channels were constructed to solve critical flood problems. This effort was successful; however, the construction resulted in a further loss of wetlands and fish and wildlife habitat. A reconnaissance study completed in December 1991 identified extensive potential Federal involvement in the Anacostia watershed restoration effort. The reconnaissance study recommended that additional feasibility studies be conducted at numerous sites in the Anacostia area. One recently completed feasibility study recommended $18,800,000 in Federal projects for stream restoration and wetland construction. This feasibility study would investigate additional sites that were identified in the reconnaissance study and are supported by the local agencies for Federal involvement. The potential project sponsors are the State of Maryland, District of Columbia, Prince George's County, and Montgomery County.

Fiscal Year 1995 funds are being used to ammend the reconnaissance report, negotiate a feasibility cost-sharing agreement and develop an initial project management plan, If the reconnaissance report is certified to be in accordance with policy, the funds requested for Fiscal Year 1996 will be used to continue into the second feasibility phase study, including data collection, evaluation of potential project sites, formulation of detailed project concepts, and public coordination. The preliminary estimated cost of the feasibility phase is $3,000,000, which is to be shared on a 50-50

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Anacostia River and Tributaries, MD and DC					

percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$5,930,000
Reconnaissance Phase (Federal)	360,000
Feasibility Phase (Federal)	2,785,000
Feasibility Phase (Non-Federal)	2,785,000

The reconnaissance phase is scheduled for completion in August 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Baltimore Metropolitan Water Resources	1,480,000	388,000	141,000	500,000	451,000

The study area includes the entire drainage basins of the Patapsco and Gunpowder rivers, plus several small tributaries to the Chesapeake Bay encompassing Baltimore City and portions of Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties. The Patapsco River watershed has been identified by the State of Maryland as a high-priority tributary to the Chesapeake Bay, as part of their overall Chesapeake Bay strategy to improve the Bay's quality. There are numerous significant water resources-related problems in the study area including flood damage prevention, environmental restoration, and commercial navigation. Major fluvial flooding in the area occurred in August 1971, June 1972, September 1975, and September 1979 with resulting damages of $12,000,000, $27,000,000, $20,000,000, and $16,000,000, respectively. The flooding predominantly occurred along the mainstem Patapsco River and impacted the Ellicott City, Elkridge, Pumphrey, and North Linthicum communities. Based on rapid growth in suburban areas, there is a need to re-examine flood protection for upstream developed areas. The Maryland Hurricane Evacuation Study jointly prepared by the Federal Emergency Management Agency and the Corps has reaffirmed the large damage potential associated with a major hurricane event. Previous dredging of Federal navigation channels, specifically Baltimore Harbor and Channels, has contributed to the loss and degradation of fish and wildlife habitat, and methods to restore this habitat will be considered including: wetland creation, restoration of riparian vegetation, and removal of fish passage blockages. Commercial navigation needs for shallow draft vessels require examination. In particular, dredging requirements and beneficial uses of the dredged material need to be identified.

The State of Maryland understands the cost-sharing requirements and strongly supports the study.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase at full Federal expense and, if the reconnaissance report is certified to be in accordance with policy, continue into feasibility phase of the study. Fiscal Year 1996 funds will be used to continue the feasibility phase of the study including data collection, detailed problem/opportunity definition, formulation of detailed project concepts, and public coordination. The preliminary estimated cost of the feasibility phase is $2,000,000 which is to be cost-shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,480,000
Reconnaissance Phase (Federal)	480,000
Feasibility Phase (Federal)	1,000,000
Feasibility Phase (Non-Federal)	1,000,000

The reconnaissance phase is scheduled for completion in June 1995. A completion date is being determined for this feasibility study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Patuxent River Water Resources	700,000	0	350,000	350,000	0

The Patuxent River builds from narrow, shallow streams in Montgomery and Howard Counties, Maryland, flows 110 miles in a south-easterly direction, and widens to two miles in the estuary before emptying into the Chesapeake Bay. Federal projects in the basin included a flood control project for Upper Marlboro, Maryland, and navigation projects for Bristol Bar and Nan Cove. The river is located between the intense urban development of Baltimore, Maryland, and Washington, D.C. The water resources problems in the basin reflect the impact of increasing development in terms of environmental degradation. Despite their positive benefits, the construction of the Federal projects has contributed to the degradation and loss of the region's fish and wildlife habitats. An estimated 75 acres and five miles of river reach have been impacted by the existing Federal projects. This investigation will focus on environmental restoration, wetlands protection, local flood protection, navigation and erosion control throughout the basin. Potential sponsors include Howard, Montgomery, Anne Arundel, Prince Georges, Charles, Calvert, and St. Marys Counties and the State of Maryland. These entities fully understand the cost sharing requirements for the feasibility phase of the study.

Fiscal Year 1995 funds are being used to initiate the reconnaissance phase at full Federal expense. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance report, begin negotiations on a feasibility cost sharing agreement, and begin development of an initial project management plan for the feasibility phase of the study. The reconnaissance report is scheduled to be completed in July 1996, which is 18 months after initiating the study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NEW JERSEY					
South River, Raritan River Basin	500,000	125,000	350,000	25,000	0

South River is a tributary to the Raritan River located in Middlesex County, New Jersey, draining a 132 square mile watershed, and flowing northerly into the Raritan River. The lower portion of the basin includes the Boroughs of Sayreville, South River, and East Brunswick, and is highly developed and subject to tidal flooding. The upper portion of the basin is experiencing rapid growth.

Flooding from Hurricane Gloria in September 1985 resulted in property damage, evacuations of residents, and disruption of businesses and transportation systems. Recent storms in December 1992 and March 1993 caused extensive damage to residential and commercial properties in Sayreville and South River. The December 1992 storm caused damages estimated at $6,100,000 in the entire basin. Historically, flood elevations have exceeded 6 feet above mean high water.

The State of New Jersey Department of Environmental Protection has indicated its support for the study. This study will give consideration to local flood protection measures against damages in the South River Basin.

Fiscal Year 1995 funds are being used to complete the reconnaissance report in May 1995 at full federal expense, which is 12 months after initiating the study. Fiscal Year 1996 funds will be used to complete the reconnaissance phase of the study in November 1995.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NEW YORK					
Susquehanna River Basin Water Management, NY, PA & MD	500,000	0	210,000	290,000	0

The study area encompasses the Susquehanna River Basin and its 27,510-square mile drainage area which includes portions of New York, Pennsylvania, and Maryland. This study will develop a comprehensive plan to manage the existing reservoir storage in an effort to maintain and enhance aquatic resources as well as minimize flood related damages in the Susquehanna River reaches.

The need for the reservoir storage was demonstrated during the 1991 drought when Cowanesque Lake storage was released in response to low flow conditions. Subsequently, the Susquehanna River Basin Commission has tentatively identified several Corps reservoirs for potential future sources of consumptive use storage. Currently, the Susquehanna River Basin Commission owns storage at two Corps facilities, Cowanesque and Curwensville Lake. The study will investigate alternatives for managing existing storage during high and low flow events, providing future storage, and will consider related flood damage reduction needs in the basin. Purchase of the make-up storage from existing Corps reservoirs would return as much as $40-100 million to the Federal treasury, as reimbursement for the original construction cost.

The Susquehanna River Basin Commission has shown strong interest in the reconnaissance study.

Fiscal Year 1995 funds are being used to initiate the reconnaissance phase at full Federal expense. The funds requestsd for Fiscal Year 1996 will be used to complete the reconnaissance report in March 1996, which is 12 months after initiating the study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
PENNSYLVANIA					
Juniata River Basin	500,000	450,000	0	50,000	0

The study area is the Juniata River Basin which drains 3,409 square miles in south-central Pennsylvania. The reconnaissance study evaluated existing problems in the Juniata River corridor and main tributaries to determine if improvements for fish and wildlife restoration, flood damage reduction, and related purposes were warranted. Initial investigations indicate that there is justification for and a Federal interest in environmental restoration activities to restore habitat lost due to existing Federal projects in the Juniata River Basin. Solutions being investigated to address the environmental restoration need include wetland creation, stream restoration, and riparian buffers.

By letter dated 3 June 1993, the Borough of Tyrone has indicated its support for the study

Carryover funds into Fiscal Year 1995 are being used towards completing the reconnaissance report in September 1995 at full Federal expense, which is 18 months after initiating the study. Fiscal Year 1996 funds will be used to complete the reconnaissance phase of the study in May 1996.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Lackawanna River Basin	2,285,000	1,000,000	0	0 1/	1,285,000

The Lackawanna River Basin covers about 350 square miles in northeast Pennsylvania. The basin has been a focus of anthracite mining, transportation activities, and residential and industrial development since the mid-1800's. Past resource exploitation has resulted in a wide range of water and related land resource problems including: increased flooding; lost fish and wildlife, and aquatic habitat; erosion and sedimentation; and reduced recreational use of the Lackawanna River. Creation of a river corridor greenway along the Lackawanna River offers an opportunity to correct these problems through environmentally sensitive projects and programs. Alternative plans investigated during the reconnaissance study focused on multi-purpose environmental restoration for improved riparian, wetland, upland and aquatic habitat; flood damage reduction; low flow management; recreation; and public education. The reconnaissance report indicates that there is justification for and a Federal interest in environmental restoration activities to restore habitat lost due to existing Federal and state flood control projects in the Lackawanna River Basin. Solutions proposed include establishment of riparian buffers, stream restoration, and creation of wetlands. In addition, reallocation of the Corps' Stillwater Lake storage is proposed to restore downstream degraded aquatic habitat. A feasibility study would investigate these environmental restoration opportunities in greater detail. The other elements studied as part of the reconnaissance study, such as recreation, could be pursued further by other Federal, state, or local agencies.

The primary proponent to date has been the Lackawanna River Corridor Association, but the likely non-Federal sponsors for the feasibility phase of the study will be Lackawanna County with assistance from the Commonwealth of Pennsylvania. Both understand the cost sharing requirements for the feasibility phase of the study. By letters dated 25 May 1993 and 17 June 1993, respectively, the Lackawanna County Commissioners and two Pennsylvania resource agencies stated their intent to negotiate a feasibility study cost sharing agreement.

The programmed carryover from Fiscal Year 1994 into Fiscal Years 1995 and 1996 will be used to continue into the feasibility phase of the study, including data collection, detailed problem/opportunity definition, formulation of detailed project concepts, and public coordination. The preliminary estimated cost of the feasibility phase is

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1/ $188,000 of the amount available from FY 1995 is scheduled as programmed carryover into FY 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Lackawanna River Basin					

$3,000,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,785,000
Reconnaissance Phase (Federal)	785,000
Feasibility Phase (Federal)	1,500,000
Feasibility Phase (Non-Federal)	1,500,000

The reconnaissance phase is scheduled to be completed in June 1995. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Milton	500,000	182,000	303,000	15,000	0

The Borough of Milton is located on the east bank of the West Branch Susquehanna River, 11 miles above its confluence with the Susquehanna River, in Northumberland County, Pennsylvania. The West Branch drains an area of 6,700 square miles upstream of Milton. The communities of West Milton and New Columbia are located on the opposite bank and immediately upstream of Milton. The study area also includes small portions of Turbot Township and West Chillisquaque Township located on the east bank of the river. The study area has been subject to periodic flooding by the West Branch Susquehanna River. Over the past 60 years, the area has experienced six major floods: 1936, 1946, 1951, 1964, 1972, and 1975. Flooding in April 1993 resulted in river levels of 3.5 feet above flood stage, causing some minor damages and emergency evacuations, as well as significantly increasing local interest in flood protection measures. The greatest flood of record was in June 1972 (Tropical Storm Agnes) and caused damages estimated at about $39,000,000. Solutions proposed include improvements to the existing flood forecast and warning system and a levee/floodwall system which utilizes mechanically stabilized earthen walls.

The Borough of Milton and the Commonwealth of Pennsylvania strongly support the study.

Fiscal Year 1995 funds are being used to complete the reconnaissance report at full Federal expense in March 1995, which is 12 months after initiating the study. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase of the study in March 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
WEST VIRGINIA					
North Branch Potomac River Environmental Restoration, WV, MD & PA	1,800,000	400,000	75,000	275,000	1,050,000

The North Branch Potomac River Basin extends 97 miles and drains 1,328 square miles of West Virginia, Maryland, and Pennsylvania. The watershed features include the Corps of Engineers' multi-purpose Jennings Randolph Lake project and the Savage River Reservoir project which was partially constructed by the Corps of Engineers. In addition, Federal local flood protection projects in Bayard, West Virginia, and Kitzmiller and Cumberland, Maryland, are directly located on the North Branch. Despite their positive benefits, the construction of these projects has contributed to the degradation and loss of the region's fish and wildlife habitats. An estimated 2,000 acres and 20 miles of river reach have been impacted by the existing Federal projects. Of particular concern are the degraded reaches in the Savage and North Branch Potomac Rivers adjacent to a regionally recognized trophy trout stream. The reconnaissance study has focused on flood damage reduction, improvement of recreation opportunities, water quality and fish and wildlife habitat. The feasibility study will focus on measures to restore fish and wildlife habitat and other opportunities to include environmental restoration. For instance, creation of wetland areas adjacent to the river would restore fish and wildlife habitat lost from previous construction activities, and as an incidental benefit, flood overflow zones would reduce downstream river stages and filter out impurities in the water. Other improvements to be investigated include creation of terrestrial habitat, development of riparian fringe habitat, and modification to existing reservoir releases for fishery needs.

Potential non-Federal sponsors for the feasibility phase of the study include the States of Maryland and West Virginia, as well as the Interstate Commission on the Potomac River Basin. These entities fully understand the cost sharing requirements for the feasibility phase of the study, and the Maryland Department of Natural Resources has indicated its willingness to cost share in any future feasibility phases.

Fiscal Year 1995 funds are being used to complete the reconnaissance phase at full Federal expense. If the reconnaissance report is certified to be in accordance with policy, Fiscal Year 1996 funds will be used to continue into the feasibility phase of the study, including data collection, detailed problem/opportunity definition, formulation of detailed project concepts, and public coordination The preliminary estimated cost of the feasibility phase is

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
North Branch Potomac River Environmental Restoration, WV, MD & PA					

$2,600,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost-sharing is as follows:

Total Estimated Study Cost	$3,100,000
Reconnaissance Phase (Federal)	500,000
Feasibility Phase (Federal)	1,300,000
Feasibility Phase (Non-Federal)	1,300,000

The reconnaissance phase is scheduled for completion in March 1996. A completion date is being determined for this feasibility study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
c. Shoreline Prevention Studies:					
DELAWARE					
Delaware Bay Coastline, DE & NJ	3,406,000	1,306,000	750,000	880,000	470,000

The study area is located along the New Jersey and Delaware shorelines of the Delaware Bay. Approximately 60 miles of shoreline are being investigated, located in two areas; Salem River to Cape May Point in New Jersey, and the Chesapeake and Delaware Canal to Cape Henlopen in Delaware. This study is evaluating adverse impacts associated with storm damages along the shoreline and determining the costs and benefits of potential Federal projects.

The Delaware Bay coast has a long history of severe erosion subjecting shoreline properties to storm damage from wave attack and tidal inundation. This has caused loss of lives, severe economic losses, social disruption and the loss of valuable fish and wildlife habitat. Comparison of early shoreline charts show continual erosion and accretion of shoreline over the past 112 years of record, resulting in substantial quantities of material lost, thereby narrowing and lowering the beaches. Areas under study have erosion rates estimated as high as 15 feet per year. Major storms occurred in August 1933, November 1950, March 1962, March 1984, October 1991, January 1992, and December 1992. The coastal storm of 1962 resulted in the loss of nine lives, physical damage to 1,251 residences and 16 businesses, and economic losses estimated at more than $5,400,000 at that time.

The reconnaissance report, completed in August 1992, recommended that more detailed studies were warranted for the purpose of storm damage reduction. These will consist of a series of seven interim feasibility phase studies for the following areas within New Jersey and Delaware:

New Jersey:

1. Maurice River Area
2. Villas and Vicinity
3. Reeds Beach to Pierces Point
4. Oakwood Beach

Delaware:

1. Broadkill Beach
2. Roosevelt Inlet and Lewes Beach
3. Port Mahon

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Delaware Bay Coastline, DE & NJ					

The study is supported by the State of New Jersey Department of Environmental Protection, and by the State of Delaware Department of Natural Resources and Environmental Control. The feasibility cost-sharing agreement for areas in Delaware was executed on December 2, 1992, and the feasibility study cost sharing agreement for areas in New Jersey was executed on July 2, 1993.

Fiscal Year 1995 funds are being used to continue the feasibility studies for the first two interim areas, Broadkill Beach, DE, and Maurice River, NJ, including plan selection and report preparation for the first two interim areas, and continue into the Port Mahon, DE, Roosevelt Inlet and Lewes Beach, DE, and Villas and Vicinity, NJ, interim feasibility studies. The funds requested for Fiscal Year 1996 will be used to continue the feasibility studies for five interim study areas and continue into the Reeds Beach to Pierces Point interim study. The estimated cost of the feasibility studies is $5,912,000 which is cost shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$6,362,000
Reconnaissance Phase (Federal)	450,000
Feasibility Phase (Federal)	2,956,000
Feasibility Phase (Non-Federal)	2,956,000

The reconnaissance phase was completed on December 2, 1992, for Delaware, and July 2, 1993, for New Jersey. The interim feasibility reports are scheduled for completion as follows: Broadkill Beach in October 1996; Maurice River in January 1997; Lewes Beach and Roosevelt Inlet in June 1997; and Port Mahon in September 1997. Completion dates are being determined for interim feasibility reports at Villas and Vicinity, Reeds Beach to Pierces Point, and Oakwood Beach.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Delaware Coast from Cape Henlopen to Fenwick Island	2,845,000	1,890,000	192,000	145,000	618,000

The study area is located along the entire 25 mile Atlantic Ocean coast of Delaware which includes all of the State's ocean frontage and lies entirely in Sussex County. The purpose of the study is to investigate shore protection and hurricane and storm damage problems and to consider potential solutions.

The Delaware coast has a long history of severe erosion which has caused significant economic losses, loss of lives, extensive flood damages, and social disruption. Comparison of early shoreline charts show continual erosion and accretion of shorelines over a 137-year period resulting in a net shoreline erosion rate of approximately 4 feet per year. The loss of substantial quantities of material has narrowed and lowered the beaches, subjecting public and private property to storm damage from wave attack and tidal inundation. Storms of record that have caused significant damage occurred in August 1933, September 1944, and March 1962. The March 1962 coastal storm caused damage to 1,932 residences and 85 businesses along the Atlantic coastline. The total damage to the entire study area was $16,700,000 (1962 prices). In addition, winter northeasters often buffet the coastline resulting in erosion and associated losses. In recent years, the most notable of these occurred in December 1974, October 1977, March 1984, March 1989, October 1991, January 1992 and December 1992. Damages from the December 1992 storm were estimated to be $1,000,000 along the Atlantic coast of Delaware.

A reconnaissance report determined that more detailed study of shore protection measures are warranted for the purpose of storm damage reduction. The overall feasibility study is subdivided into interim studies of three separate shoreline reaches. The first interim study reach extends from Rehoboth Beach to Dewey Beach. The second interim study reach extends from Bethany Beach to South Bethany Beach and the final study reach will be Fenwick Island. The State of Delaware executed the feasibility study cost sharing agreement on 4 May 1992.

Fiscal Year 1995 funds are being used to continue the feasibility phase, including the final plan formulation for the Rehoboth Beach to Dewey Beach area and continue into the feasibility phase for the Bethany Beach to South Bethany Beach area. The funds requested for Fiscal Year 1996 will be used to complete the feasibility report for Rehoboth Beach to

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Delaware Coast from Cape Henlopen to Fenwick Island					

Dewey Beach area and continue the Bethany Beach to South Bethany Beach interim study with hydraulic, environmental, economic and real estate studies. The estimated cost of the feasibility phase is $4,190,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$4,940,000
Reconnaissance Phase (Federal)	750,000
Feasibility Phase (Federal)	2,095,000
Feasibility Phase (Non-Federal)	2,095,000

The reconnaissance phase was completed on 4 May 1992. The interim feasibility report at Rehoboth Beach to Dewey Beach is scheduled to be completed in July 1996. Completion dates are being determined for interim feasibility reports at Bethany Beach to South Bethany Beach and the final report including Fenwick Island.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NEW JERSEY					
Brigantine Inlet to Great Egg Harbor Inlet	1,717,000	1,080,000	320,000	115,000	202,000

The study area is a portion of the New Jersey coastline extending approximately 15 miles from Brigantine Inlet to Great Egg Harbor Inlet. It encompasses five communities including Atlantic City. The principal purpose of the study is to investigate hurricane and storm damage problems attributed to natural and man-made conditions. The study will determine the effects of those conditions on man's activities in the coastal environment in an effort to reduce damages, improve coastal planning and engineering, reduce maintenance dredging of Federal projects and alleviate coastal erosion. Additionally, the understanding of nearshore and estuarine environments and physical processes will assist New Jersey in identifying sources and trajectories for noxious floatable debris and spills of pollutants.

Comparison of shoreline charts show a net erosion of shoreline over the past 133 years of record resulting in a narrowing and lowering of beaches. This has reduced the storm protection that would have otherwise been available. As a result, public and private property are subject to storm damage from wave attack and tidal inundation. During times of storms, extensive damages have occurred, lives have been lost, and when evacuation was considered necessary, families have suffered hardships and inconvenience. Major storms occurred in September 1944, March 1962, March 1984, September 1985, March 1989, October 1991, January 1992, and December 1992. The coastal storm of March 1962 resulted in physical damage to 267 structures and damages of $26,000,000. The December 1992 storm produced the second highest water levels recorded at the Atlantic City, New Jersey, tide gage, resulting in structural damage and extensive beach and dune erosion. Damage which qualified for Federal Emergency Management Agency assistance totaled $2,600,000 for Atlantic County.

A reconnaissance report, completed in February 1992, determined that a more detailed study of shore protection measures is warranted for the purpose of storm damage reduction. The feasibility study is being conducted in two stages. An interim study will be conducted for the reach from Absecon Inlet to Great Egg Harbor Inlet (Absecon Island). This interim includes substantial data acquisition and analysis to define existing coastal processes and conditions along the entire study area. The final report will cover the coastline from Brigantine Inlet to Absecon Inlet (Brigantine Island).

The State of New Jersey, Department of Environmental Protection, executed the feasibility study cost sharing agreement in January 1993.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Brigantine Inlet to Great Egg Harbor Inlet					

Fiscal Year 1995 funds are being used to continue the feasibility phase of Absecon Island interim study, including final plan formulation studies and report preparation, and to continue into the feasibility phase of the Brigantine Island interim study including economic, environmental and real estate studies. The funds requested for Fiscal Year 1996 will be used to finalize the draft Absecon Island interim study report and draft EIS and continue with the Brigantine Island interim study.

The estimated cost of the feasibility phase is $2,434,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,934,000
Reconnaissance Phase (Federal)	500,000
Feasibility Phase (Federal)	1,217,000
Feasibility Phase (Non-Federal)	1,217,000

The reconnaissance phase was completed in January 1993. The interim feasibility report for Absecon Island is scheduled for completion in December 1996. A completion date is being determined for the final report, including the interim feasibility report at Brigantine Island.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Great Egg Harbor Inlet to Townsends Inlet	500,000	0	210,000	290,000	0

This study is a portion of the New Jersey coastline extending approximately 16 miles from Great Egg Harbor Inlet to Townsends Inlet.

Comparison of shoreline charts show a net erosion of shoreline over the past 133 years of record resulting in a narrowing and lowering of beaches. This has reduced the storm protection that would have otherwise been available. As a result, structures are subject to storm damage from wave attack and tidal inundation. During times of storms, extensive damages have occurred, lives have been lost, and when evacuation was considered necessary, families have suffered hardships and inconvenience. Major storms occurred in September 1944, March 1962, March 1984, September 1985, March 1989, October 1991, January 1992, and December 1992. The coastal storm of March 1962 resulted in damage to 2,629 structures at a cost of $24.3 million. The December 1992 storm produced the second highest water levels recorded at the Atlantic City, New Jersey tide gage, resulting in structural damage and extensive beach and dune erosion within the study area. Damages from this storm, which qualified for FEMA assistance, totaled $1.3 million for this reach.

The principal purposes of the study are to investigate hurricane and shore damage problems attributed to natural and man-made conditions. The study will determine the effects of those conditions on man's activities in the coastal environment in an effort alleviate coastal erosion. Additionally, the understanding of nearshore and estuarine environments and physical processes will assist New Jersey in identifying sources and trajectories for noxious floatable debris and spills of pollutants. The State of New Jersey, Department of Environmental Protection has indicated its support for the study and its willingness to cost share in the feasibility phase by letter dated 6 December 1994.

Fiscal Year 1995 funds will be used to initiate the reconnaissance phase of the study at full Federal expense. The funds requested in Fiscal Year 1996 will be used to complete the reconnaissance report in April 1996, which is 12 months after initiating the study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Lower Cape May Meadows - Cape May Point	1,300,000	525,000	231,000	350,000	194,000

The study area is located along the southern Atlantic coast of New Jersey, extending approximately 2.5 miles to include Lower Cape May Meadows and the Borough of Cape May Point. Lower Cape May Meadows contains a state park with important coastal freshwater wetlands which is a vital resting area for shorebirds and birds of prey during their seasonal migration along the Atlantic flyway. The Borough of Cape May Point, which is located at the western end of Lower Cape May Meadows, is a community of approximately 600 homes.

The complex interaction of the Delaware Bay and the Atlantic Ocean and construction of the Federal navigation project at Cape May Inlet has also caused erosion along the shoreline approaching 30 feet per year. This has caused repeated local action to construct and rehabilitate groins, provide beach nourishment, and construct dunes since the 1930's. Major storms have occurred in September 1944, March 1962, September 1974, March 1984, September 1985, March 1989, October 1991, January 1992, and December 1992. The coastal storm of March 1962 caused damage to 689 structures in Cape May Point, West Cape May and Lower Township. The December 1992 storm caused extensive damage to the beach and dunes at Cape May Point, and breached the dunes fronting Lower Cape May Meadows. It also caused saltwater intrusion in the wetland contained within the Meadows and extensive flooding in Cape May Point and West Cape May. Erosion of the Lower Cape May Meadows shoreline and dune system has degraded fish and wildlife habitat and reduced the productivity of the Meadows' wetland ecosystem.

The study will address restoration of the fish and wildlife habitat, and hurricane and storm damage prevention. Strong support for restoring the habitat within the Lower Cape May Meadows has been expressed by Federal, state and other resource agencies and organizations including the Environmental Protection Agency, U.S. Fish and Wildlife Service, New Jersey Department of Environmental Protection, Ducks Unlimited, New Jersey Audubon Society, and the Nature Conservancy. The State of New Jersey, Department of Environmental Protection has indicated their intent to cost share in the feasibility phase.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Lower Cape May Meadows - Cape May Point					

As directed in the Fiscal Year 1994 House Committee Appropriations report, the Lower Cape May Meadows reconnaissance study was been expanded to include Cape May Point.

Fiscal Year 1995 funds will be used to complete the reconnaissance report at full Federal expense and, if the reconnaissance report is certified in accord with policy, continue into the feasibility phase of the study, including field data collection and hydraulic, economic and environmental studies. The funds requested for Fiscal Year 1996 will be used to continue feasibility studies, including plan formulation. The estimated cost of the feasibility phase is $1,500,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of the study cost sharing is as follows:

Total Estimate Study Cost	$2,050,000
Reconnaissance Phase (Federal)	550,000
Feasibility Phase (Federal)	750,000
Feasibility Phase (Non-Federal)	750,000

The reconnaissance phase is scheduled to be completed in April 1995. A completion date is being determined for this feasibility study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Manasquan Inlet to Barnegat Inlet	500,000	0	210,000	290,000	0

This study is a portion of the New Jersey coastline extending approximately 24 miles from Manasquan Inlet to Barnegat Inlet.

Storm activity has caused considerable erosion within the study area and has resulted in a narrowing and lowering of beaches. This has reduced the storm protection that would have otherwise been available. As a result, structures are subject to storm damage from wave attack and tidal inundation. During times of storms, extensive damages have occurred, lives have been lost, and when evacuation was considered necessary, families have suffered hardships and inconvenience. Major storms have occurred in September 1944, March 1962, March 1984, September 1985, October 1991, January 1992, and December 1992. The Coastal storm of March 1962 resulted in damage to 5,759 structures costing $8 million dollars. The December 1992 storm produced the second highest water levels recorded at the Atlantic City, NJ tide gage, resulting in structural damage and extensive beach and dune erosion within the study area. Damages exceeded $2 million from the December 1992 storm. The study area contains several densely developed communities with a greater year round population than most shore communities to the south. The study area also contains Island Beach State Park, a barrier island wildlife area.

The principal purposes of the study are to investigate hurricane and storm damage problems and water quality problems attributed to natural and man-made conditions. The study will determine the effects of those conditions on man's activities in the coastal environment in an effort to alleviate coastal erosion. Additionally, the understanding of nearshore and estuarine environments and physical processes will assist the State of New Jersey in identifying sources and trajectories for noxious floatable debris and spills of pollutants. The State of New Jersey, Department of Environmental Protection has indicated its support for the study by letter, dated 6 December 1994.

Fiscal Year 1995 funds will be used to initiate the reconnaissance phase of the study at full Federal expense. The funds requested in Fiscal Year 1996 will be used to complete the reconnaissance report in March 1996, which is 12 months after initiating ths study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Raritan Bay and Sandy Hook Bay	3,189,000	677,000	470,000	620,000	1,422,000

The study area encompasses Raritan Bay and Sandy Hook Bay, at the southern end of the Lower New York Bay between the mouth of the Raritan River and Sandy Hook, in Middlesex and Monmouth Counties, New Jersey.

The study area experiences flooding due to the loss of protective beaches and increased urbanization in the area. Structures are damaged from coastal storm surges, wave attack and flow from tidal creeks. Further flooding is caused by the lack of any significant drainage slope. Solutions being investigated include extensione and/or improvements on the existing project, which currently provides segmented storm and hurricane damage protection for a few communities in the form of beach fills, dunes, levees, tidegates and appurtenant features. Strong local and state support for a region-wide solution to this problem exists.

The purpose of the study is to determine the advisability of hurricane and storm damage reduction improvements for the Raritan Bay and Sandy Hook Bay shore. The feasibility cost sharing agreement was executed on 10 February 1994 with the New Jersey Department of Environmental Protection.

Fiscal Year 1995 funds will be used to continue the feasibility phase of the study, including performing engineering and economic analyses, and environmental impact investigations for the first interim study at Port Monmouth. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study, including engineering and economic analyses, and environmental baseline investigations for the interim studies at Port Monmouth continue into the interim feasibility study for Union Beach. The estimated cost of the feasibility phase is $5,378,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$5,878,000
Reconnaissance Phase (Federal	500,000
Feasibility Phase (Federal)	2,689,000
Feasibility Phase (Non-Federal)	2,689,000

The reconnaissance phase was completed in February 1994. The interim feasibility report at Port Monmouth is scheduled for completion in March 1997. Completion dates are being detemined for interim feasibilty reports at Union Beach, Leonardo, Highlands, Keyport and the final report.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996

North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Raritan Bay and Sandy Hook Bay, Cliffwood Beach	320,000	0	268,000	52,000	0

Cliffwood Beach is located in the Aberdeen Township, Middlesex County, New Jersey between Matawan Point and Whale Creek along Raritan Bay. The study area experiences flooding due to the loss of protective beaches and increased urbanization in the area. Structures are damaged from coastal storm surges, wave attack and flow from tidal creeks. Further flooding is caused by the lack of any significant drainage slope. In addition, a locally constructed seawall is threatened due to the erosion and loss of the beach fronting the structure. Solutions to be investigated include beach fill, dunes, levees, tidegates, and appurtenant features. There is strong local and state support for the study.

The purpose of the study is to determine the advisability of hurricane and storm damage reduction improvements for the Cliffwood Beach portion of the Raritan Bay and Sandy Hook Bay shore. The New Jersey Department of Environmental Protection has indicated its support for the study.

Fiscal Year 1995 funds will be used to initiate the reconnaissance study at full Federal expense. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance phase of the study. The reconnaissance report is scheduled to be completed in May 1996, which is 12 months after initiating the study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Townsends Inlet to Cape May Inlet	1,250,000	1,001,000	128,000	80,000	41,000

The study area is located along the southern Atlantic coast of New Jersey, extending approximately 15 miles from Townsends Inlet to Cape May Inlet.

Comparison of shoreline charts show a net erosion of shoreline over the past 133 years of record resulting in a narrowing and lowering of beaches. This has reduced the storm protection that would have otherwise been available. As a result, public and private property are subject to storm damage from wave attack and tidal inundation. During times of storms, extensive damages have occurred, lives have been lost, and when evacuation was considered necessary, families have suffered hardships and inconvenience. Major storms occurred in September 1944, March 1962, March 1984, September 1985, March 1989, October 1991, January 1992, and December 1992. The coastal storm of March 1962 resulted in physical damage to 326 structures and damages of $18,000,000. The December 1992 storm produced the second highest water levels recorded at the Atlantic City, New Jersey, tide gage, resulting in structural damage and extensive beach and dune erosion within the study area. Damage which qualified for Federal Emergency Management Agency assistance totaled $3,400,000 for Cape May County.

A reconnaissance report completed in January 1992 found that a more detailed study of shore protection measures is warranted in the study area. The feasibility report will address storm damage reduction at Avalon, Stone Harbor, and North Wildwood, as well as environmental restoration at the southern end of Stone Harbor.

The principal purpose of the study is to investigate hurricane and storm damage problems attributed to natural and man-made conditions. The study will determine the effects of those conditions in the coastal environment in an effort to reduce damages, improve coastal planning and engineering, reduce maintenance dredging of Federal projects and alleviate coastal erosion. Additionally, an understanding of nearshore and estuarine environments and physical processes will assist New Jersey in identifying sources and trajectories for noxious floatable debris and spills of pollutants.
The State of New Jersey, Department of Environmental Protection, executed the feasibility cost sharing agreement on 19 November 1992.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Townsends Inlet to Cape May Inlet					

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study, including plan formulation and economic and environmental analyses. Fiscal Year 1996 funds will be used to prepare the draft report and EIS. The estimated cost of the feasibility study is $2,100,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,300,000
Reconnaissance Phase (Federal)	200,000
Feasibility Phase (Federal)	1,050,000
Feasibility Phase (Non-Federal)	1,050,000

The reconnaissance phase was completed in November 1992. The feasibility study is scheduled for completion in March 1997.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NEW YORK					
Atlantic Coast of New York	7,000,000	0	838,000	1,400,000	4,762,000

The study area encompasses the Atlantic Coast of New York from Coney Island in the west to Montauk Point a distance of approximately 130 miles. The shoreline development ranges from highly urbanized in the New York City Boroughs of Brooklyn and Queens and the City of Long Beach in Nassau County to parkland and sparce development to the east. For much of the south shore the predominant land form is a series of barrier islands separated by six coastal inlets. These barrier islands shelter environmentally sensitive bay areas and low lying, heavily developed mainland areas. The various municipalities along the south shore areas have been subject to severe storm induced flooding and erosion resulting in heavy property damage. Many areas of the south shore are the subject of Federal storm damage reduction studies or projects.

The purpose of this study is to assemble data to address both short term post storm actions and long term storm damage reduction and erosion control measures which will provide a comprehensive baseline which can be utilized for site specific investigations. In coordination with the State of New York, the intent of this effort is to define and monitor the coastal process which affect the south shore of New York City and Long Island. Programmed work includes physical processes and morphologic response monitoring beach surveys on a seasonal and post-storm basis, aerial photography, shoreline erosion analysis, collection of wave data, and development of predictive models with a computerized data base. The New York State Department of Environmental Conservation supports this monitoring program.

The Fiscal Year 1995 funds are being used to develop a plan of study, initiate a monitoring effort including aerial photography of the coastline, beach profile surveys and the initial development of a computer database that would be accessible to the professional coastal engineering community. The funds requested for Fiscal Year 1996 will be used to continue the seasonal and post-storm monitoring efforts and the testing and implementation of the computer database. A completion date is being determined for this monitoring program.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Jamaica Bay, Marine Park and Plumb Beach	1,500,000	500,000	293,000	350,000	357,000

Jamaica Bay, located in the Boroughs of Queens and Brooklyn New York City, is about 8 miles long and 4 miles wide and covers 26 square miles and opens to the Atlantic Ocean via Rockaway inlet. Marine Park and Plumb Beach are located on the north side of Rockaway Inlet. The community of Arverne is located on the Rockaway peninsula.

Plumb beach is directly adjacent to the Belt Parkway. The Belt Parkway is a major metropolitan thoroughfare with weekday usage through the Plumb Beach area averaging 73,000 vehicles in each direction. The specific problem for the study area is exposure to damages from severe coastal storm events. Damage to the Belt Parkway has closed this important thoroughfare and caused significant traffic disruption, transportation cost increases, and safety problems. Local interests, including the New York City Department of Parks and Recreation, strongly support a Section 103 study for Plumb Beach. Major storm damage also affected the communities of Arverne, Broad Channel and Howard Beach. Arverne's low ground elevations put its residential and commercial structures at risk of storm and flood related damages. Damages to Arverne were estimated at approximately 280 residential, commercial and public structures. Commercial businesses have been forced to cease operations due to floods. Emergency vehicles have been prevented from reaching flooded areas. Jamacia Bay has undergone habitat degradation related to Federal activities past and present. Impacts to Jamaica Bay include wetland/aquatic habitat losses and shoreline alterations. As a result, Jamaica Bay has been identified as a candidate for significant environmental restoration potential.

The purpose of this study is to determine the feasibility of providing storm protection to Arverne and environmental restoration to Jamaica Bay. The New York State Department of Environmental Conservation has indicated by letter dated 24 April 1994 its support for the study and its willingness to cost share in the feasibility phase. The Plumb Beach area, which was investigated during the reconnaissance phase, will be advanced under the Continuing Authority Program.

If the reconnaissance report is certified to be in accord with policy, the Fiscal Year 1995 funds will be used to continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase study, including topographic analyses, and coastal, economic and environmental data gathering for

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Jamaica Bay, Marine Park and Plumb Beach					

plan formulation. The preliminary estimated cost of the feasibility phase is $2,000,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind sevices. A summary of study cost sharing is as follows:

Total estimated study cost	$2,500,000
Reconnaissance Phase (Federal)	$ 500,000
Feasibility Phase (Federal)	$1,000,000
Feasibility Phase (Non-Federal)	$1,000,000

The reconnaissance phase is scheduled for completion in April 1995. A completion date is being determined for this feasibility study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Montauk Point	765,000	350,000	75,000	125,000	215,000

The study area encompasses the Montauk Point, New York, which is located on the south fork of Long Island approximately 125 miles east of New York City.

The Montauk Point lighthouse was commissioned by General George Washington in 1796 and was completed in 1797. It was originally about 200 feet from the edge of the bluff on which it sits, but it is now less than 75 feet from the edge due to erosion of the bluff. The lighthouse is the focal point of the facilities of the Montauk Point Coast Guard Station and acts as a junction marker for ships headed for New York Harbor and Long Island Sound. The area surrounding the lighthouse is operated as a State park used primarily by fishermen and sightseers. The reconnaissance report identified that a potential project consisting of a stone revetment was economically feasible, supported by the local sponsor, could produce high priority benefits.

The purpose of the study is to determine the advisability of hurricane and storm damage reduction improvements for the Montauk Point shore. The New York State Department of Environmental Conservation has indicated its willingness to cost share the feasibility phase.

If the reconnaissance report is certified in accord with policy, the Fiscal Year 1995 funds will be used to continue into the feasibility phase of the study. The funds requested for Fiscal Year 1996 will be used to continue the feasibility phase of the study, including technical and economic analyses, and environmental efforts. The cost of the feasibility phase is currently estimated to be $830,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$ 1,180,000
Reconnaissance Phase (Federal)	350,000
Feasibility Phase (Federal)	415,000
Feasibility Phase (Non-Federal)	415,000

The reconnaissance phase is scheduled for completion in July 1995. A completion date is being determined for this feasibility study.

APPROPRIATION TITLE: General Investigations, Fiscal Year 1996 North Atlantic Division

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
North Shore of Long Island	500,000	344,000	130,000	26,000	0

The study area is located along the north shore of Long Island, New York, extending west for approximately 100 miles from Orient Point in Suffolk County to the East River in New York City.

The study area has a considerable history of tidal flooding, shore erosion, and damage to shorefront development. Hurricanes affecting the area occurred in 1938, 1944, 1954, and 1960. In addition, tropical storms occurred in the area in 1950, 1953, 1955, 1962, and 1992. Damages from the 1954 hurricane to Suffolk County, New York, were approximately $700,000. Recent coastal storms have caused shoreline erosion resulting in storm damage to several communities, including Bayville in Nassau County and the Village of Asharoken in Suffolk County. In December 1992, a northeaster inundated hundreds of residential and business properties with damages estimated at $12,000,000. In addition, approximately 300 families were evacuated, and sections of Bayville, the Village of Asharoken and Eatons Neck were impassable for days.

The study will investigate the feasibility of improvements to provide storm damage protection. The New York State Department of Environmental Conservation has indicated by letter dated 21 December 1993 its support for the study.

Fiscal Year 1995 funds are being used to complete the reconnaissance report as scheduled in September 1995, which is 12 months after initiating the study. Fiscal Year 1996 funds will be used to complete the reconnaissance phase of the study in December 1995.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
South Shore of Staten Island	500,000	300,000	170,000	30,000	0

The study area is located along the south shore of Staten Island, extending approximately 13 miles along lower New York Bay and Raritan Bay from Fort Wadsworth to Tottenville.

The area has a long history of storm damage. Recently, the shoreline experienced erosion and storm damage from the Northeaster of December 1992 and the March 1993 storm. These storms caused evacuations in several communities, damage to 40 structures from flooding, and loss of 30 structures from erosion. The December 1992 storm caused damages estimated at $5,000,000. The loss of beach front now leaves the area increasingly vulnerable to severe damages, even from moderate storms.

The purpose of this study is to identify possible solutions to hurricane and storm damages in the area. The New York State Department of Environmental Conservation has indicated by letter dated 14 February 1994 its support for the study.

Fiscal Year 1995 funds are being used to complete the reconnaissance report as scheduled in June 1995, which is 12 months after initiating the study. Fiscal Year 1996 funds will be used to complete the reconnaissance phase of the study in December 1995.

1998

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Yonkers Shoreline	500,000	0	168,000	332,000	0

The City of Yonkers, located in the southwestern corner of Westchester County, abuts the northern boundary of New York City. The Yonkers shoreline area consists of approximately 4.5 miles of the eastern bank of the Hudson River. The area is a mixture of commercial and industrial development with some environmentally sensitive lands also located along the riverfront.

Local interests indicate that the shoreline properties are subject to recurring erosion and storm damage. Existing bulkheads are old and deteriorating, offering minimal protection for existing properties. Damage caused by the December 1992, exacerbated the problem and increased the area's vulnerability to storm damage. Local interests also indicate concern that marine operations, including commuter ferry service is threatened by storm damage. The most probable non-Federal sponsor would be the State of New York.

The reconnaissance study will consider the entire 4.5 mile reach of the Yonkers shoreline, with upstream and downstream locations studied only to the extent that they impact the Yonkers study area. The expected outcome of the reconnaissance effort is the identification of a feasible plan which remediates the most critical damage areas.

Fiscal Year 1995 funds are being used to initiate the reconnaissance phase at full Federal expense. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance report in May 1996, which is 12 months after initiating the study.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
d. Special Studies:					
MARYLAND					
Chesapeake Bay Time Variable Model, MD, VA, PA & DC	3,000,000	2,000,000	230,000	335,000	435,000

The study area includes the freshwater and tidal portions of Chesapeake Bay and tributaries and encompasses parts of Maryland, Virginia, Pennsylvania, and the District of Columbia. The study area is also directly related to the Bay's 64,160-square-mile drainage area which reflects a variety of land use and run-off characteristics. Over the past several decades, major land use changes and population growth in the study area have resulted in significant increases in nutrients, toxics, erosion, and turbidity in the Bay and its tributaries. This has resulted in major declines in dissolved oxygen and living resources. The Environmental Protection Agency's Chesapeake Bay Study concluded in 1983 that the Bay's tributaries are under severe stress and that immediate action is needed to restore their environmental health and productivity.

Prior to Fiscal Year 1994, a numerical time variable three dimensional hydrodynamic and water quality model was developed as part of a cooperative effort between the Department of the Army and the Environmental Protection Agency. That large scale model was developed to answer nutrient reduction management questions for the main body of Chesapeake Bay. The total Federal cost of that modeling effort was $3,225,000 of which the Environmental Protection Agency contributed $1,725,000 and the Corps contributed $1,500,000. On December 12, 1993, a new Memorandum of Understanding was executed to extend the model to answer smaller scale tributary management questions. The Environmental Protection Agency's share for this new modeling effort is $1,500,000. Corps funds in the amount of $1,500,000 are being used for development of the hydrodynamic elements of the model. Development of the model will also expand the ability to predict impacts on the Bay from various Department of the Army activities.

Fiscal Year 1995 funds are being used to continue development of a fine grid hydrology model for the tributaries, development of tributary-specific water quality processes and calibrations, linkage to the Bay Time Variable Model, and model code development. The funds requested for Fiscal Year 1996 will be used to complete the hydrodynamic model and continue the tributary-specific water quality processes and calibrations. Study completion is defined as the development of a calibrated model which is scheduled to be completed in September 1997.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
VIRGINIA					
Eastern Shore, Accomack and Northampton Counties	500,000	0	252,000	248,000	0

The Eastern Shore of Virginia, consisting of Northampton and Accomack Counties, is a narrow peninsula about 60 miles long and 17 miles wide, and extends in a southerly direction from the eastern end of Maryland, with the Atlantic Ocean on the east and Chesapeake Bay on the west. The area is extremely flat and the coastline is carved into innumerable small bays, inlets, and tidal creeks. The Eastern Shore is rich in water related resources, and both Northampton County and Accomack County have expressed their strong desire for a comprehensive water resources planning and management study to optimize and protect the use of these resources. Specific areas of concern are related to flooding and storm damage, navigation, and environmental protection and restoration. The Eastern Shore, particularly the numerous coastal fishing communities, are subject to extensive damage by hurricanes and northeasters. The two worst storms of record occurred as a result of the August 1933 hurricane and the March 1962 northeaster. Numerous towns and communities, including Oyster, Wachapreague, Quinby, Chincoteague, and Tangier Island as well as bordering farmlands were inundated during these storms causing millions of dollars in residential, commercial, and agricultural damage. In addition, the Eastern Shore, with a combined population of 45,000, depends heavily on commercial fishing for its livelihood. In 1992, approximately 6 million pounds of commercial seafood valued at $4 million were harvested from the waters surrounding the Eastern Shore. There is a need to improve the navigation channels which provide access to the numerous fishing communities. In conjunction with evaluating probable solutions to the needs for flood damage prevention and navigation improvements is a need to assess the status of the thousands of acres of marsh and shallow water habitat along the Eastern Shore. These valuable wetlands are being eroded as a result of navigation activities as well as tidal flooding associated with hurricanes and northeasters.

The counties of Northampton and Accomack, by letters dated 22 and 23 July 1993 respectively, have indicated their support for the study and their willingness to cost share 50-50 in feasibility phase studies should the outcome of the reconnaissance study identify an economically viable plan.

Fiscal Year 1995 funds are being used to initiate the reconnaissance phase of the study at full Federal expense. The funds requested for Fiscal Year 1996 will be used to complete the reconnaissance report in March 1996, which is 12 months after initiating the study.

e. Comprehensive Studies: None

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
f. Project Review Studies:					
MARYLAND					
Jennings Randolph Lake, MD & WV - Reallocation	712,000	368,000	110,000	200,000	34,000

The existing Jennings Randolph Lake project is located in Garrett County, Maryland, and Mineral County, West Virginia, on the North Branch of the Potomac River about eight miles above its confluence with the Savage River at Bloomington, Maryland. In addition to providing flood damage protection, the project provides water supply for meeting municipal and industrial needs along the North Branch and also contributes to meeting water supply requirements in the Washington Metropolitan Area. Increasing population and economic growth in the Potomac River Basin are causing severe demands on the basin's water resources. Future drought conditions will result in marked reduction in natural stream flow in the Potomac River and freshwater inflow to the Chesapeake Bay. The State of Maryland and the water supply utilities in the Washington, D.C. area have indicated interest in the reallocation of storage at the Jennings Randolph Lake project. The reconnaisance level report confirmed that reallocation of storage at Jennings Randolph could be both a cost-effective and environmentally acceptable solution to meet these needs. The local sponsor for the study and the potential project sponsor is the State of Maryland which executed the feasibility study cost-sharing agreement on 30 August 1990. Due to technical issues, the study was suspended for approximately two years. The issues been resolved and a revised feasibility study cost-sharing agreement will be executed in March 1995.

Fiscal Year 1995 funds are being used to continue the feasibility phase of the study. Fiscal Year 1996 funds will be used to continue the feasibility phase with tasks that include finalizing design of the recommended plan, report preparation, public involvement, and internal and public review of the report. The preliminary estimated cost of the feasibility phase is $1,424,000 which will be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of the study cost-sharing is as follows:

Total Estimated Study Cost	$1,424,000
Reconnaissance Phase (Federal)	0
Feasibility Phase (Federal)	712,000
Feasibility Phase (Non-Federal)	712,000

The reconnaissance phase was completed in December 1989. The feasibility study is scheduled for completion in April 1997.

3. PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - NEW: None

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
4. PRECONSTRUCTION ENGINEERING AND DESIGN (PED) - CONTINUING:					
a. Navigation:					
DELAWARE					
Delaware River Main Channel Deepening DE, NJ & PA	10,000,000	6,218,000	2,800,000	780,000	202,000

The project extends over 100 miles from deep water in Delaware Bay to the Port of Philadelphia. Current channel depths of 40 feet are inadequate to efficiently handle existing bulk commodity vessels. A Februery 1992 interim feasibility report recommends deepening the existing 40 foot project to 45 feet, widening bends, and anchorage deepening. The project justification is based on transportation savings to commodities consisting of oil, iron ore, stone, coal, and containerized cargo. The estimated project cost is $431,600,000, with estimated Federal and non-Federal costs of $269,300,000 and $162,300,000, respectively. The average annual benefits amount to $42,900,000, all for transportation savings. The benefit-cost ratio is 1.3 to 1. The Delaware River Port Authority by letter dated December 5, 1991, indicated its intent to comply with the cost sharing provisions of the Water Resources Development Act of 1986.

The project is authorized for construction by the Water Resources Development Act of 1992 with the following cost sharing requirements: provide lands, easements, rights-of-way, and relocations necessary for the construction and subsequent maintenance including the prorated costs of using existing and future Federal disposal areas including retaining works, bear all costs of terminal facilities and dredging in berthing areas, presently estimated at $29,310,000, pay 25 percent of cost allocated to general navigation during construction, presently estimated at $89,000,000 and pay an additional 10 percent of costs allocated to general navigation, less a credit for the value of lands, easements, rights-of-way, relocations (other than utility relocations), and dredged material disposal areas, within a period of 30 years following completion.

Fiscal Year 1995 funds are being used to continue preconstruction engineering and design including environmental and economic studies, complete the ship simulation modeling, and to initiate preparation of the draft Design Memorandum. The funds requested for Fiscal Year 1996 will be used to complete the Design Memorandum and the appropriate NEPA documents, and initiate the preparation of plans and specifications. This preconstruction engineering and design effort is scheduled for completion in December 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
MARYLAND					
Baltimore Harbor Anchorages and Channels, MD & VA	1,500,000	0	0	50,000	1,450,000

Baltimore Harbor and Channels extend from Baltimore, Maryland, on the Patapsco River through the Chesapeake Bay to the Atlantic Ocean in Virginia, and through the Chesapeake and Delaware Canal and Delaware Bay to the Atlantic Ocean in Delaware. The study area is concentrating on the 32-square-mile Patapsco River and tributaries portion of the existing Baltimore Harbor and Channels project. The study is addressing the need for improving existing and/or providing additional anchorages and branch channels for the public terminals serving the Port of Baltimore. The reconnaissance study identified several economically justified alternatives which are being evaluated further in the feasibility phase of study. The feasibility study is scheduled for completion in July 1996. Based on the reconnaissance study, the recommended projects include anchorage and channel deepening and widening at an estimated cost of $18,200,000, with an estimated Federal cost of $11,800,000 and an estimated non-Federal cost of $6,400,000. The average annual benefits for navigation are $822,000 for anchorage No. 3, $567,000 for the South Locust Point channel, and $874,000 for the existing branch channels at Seagirt/Dundalk terminals. The benefit-cost ratios are 1.01, 8.0 and 1.8, respectively. The potential project sponsor is the Maryland Port Administration.

Consistent with the cost sharing and financing concepts enacted by Water Resources Development Act of 1986, local interests are required to provide lands, easements, rights-of-way, relocations, and disposal areas, bear all costs of terminal facilities and dredging in berthing areas; pay 25 percent of cost allocated to deep draft navigation during construction, and pay an additional 10 percent of costs allocated to deep draft navigation, less a credit for the value of lands, easements, rights-of-way, relocations, and dredged material disposal areas within the 30 years following completion.

Fiscal year 1996 funds will be used to continue into the preconstruction engineering and design phase. A completion date is being determined for this preconstruction engineering and design effort.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NEW JERSEY					
New York Harbor and Adjacent Channels, Claremont Terminal	1,900,000	918,000	228,000	400,000	354,000

Claremont Terminal Channel is located in New York Harbor in Hudson County, New Jersey. The channel is a privately maintained channel 27 feet deep, extending northwesterly approximately 10,000 feet from the Anchorage channel to the head of navigation. Vessels using Claremont must load to less than their capacity and then complete their loading in deeper channels, incurring increased costs and time delays in port. The principal users of the channel are scrap metal dealers exporting an average of 675,000 tons annually.

The recommended plan consists of deepening the existing 27-foot channel to a depth of 34 feet below mean low water with a width of 1,250 feet at its confluence with the Anchorage Channel, tapering to a channel width of 300 feet and extending for approximately 1.6 miles. The channel will connect with a maneuvering area 800 feet long, 90 feet wide and 34 feet deep at the upper limits of navigation. The estimated project cost is $22,000,000, with Federal and non-Federal costs of $14,000,000 and $8,000,000, respectively. The average annual benefits amount to $1,983,000, all for transportation savings, and are based on the feasibility report dated December 1986 at January 1986 prices. The benefit-cost ratio is 1.4 to 1.

The local sponsor is the Port Authority of New York and New Jersey acting on behalf of the State of New Jersey and subject to an agreement to be entered into with the State. The Port Authority will provide assurances of local cooperation on the State's behalf.

The project is authorized for construction by the Water Resources Development Act of 1986 with the following cost sharing requirements: local interests are required to provide lands, easements, rights-of-way, relocations, and disposal areas, bear all costs of terminal facilities and dredging in berthing areas, presently estimated at $3,400,000; pay 25 percent of cost allocated to deep draft navigation during construction, presently estimated at $4,600,000, and pay an additional 10 percent of costs allocated to deep draft navigation, less a credit for the value of lands, easements, rights-of-way, relocations, and dredged material disposal areas within the 30 years following completion.

Fiscal Year 1995 funds are being used to continue preconstruction engineering and design, including testing of dredged material based on new toxicity testing procedures. The funds requested for Fiscal Year 1996 will be used to continue the preconstruction engineering and design effort, including the completion of economic and environmental analyses. This preconstruction engineering and design effort is scheduled to be completed in April 1997.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NEW YORK					
Arthur Kill Channel, Howland Hook Marine Terminal, NY & NJ	2,700,000	974,000	562,000	400,000	764,000

The project area is located within the Port of New York and New Jersey. The Arthur Kill is a tidal strait connecting Raritan Bay with Newark Bay. The navigation channel depths inhibit full economy of existing deep draft ocean going vessels. Tankers arriving with drafts approaching the 45 foot Ambrose and Anchorage entrance channel depths must lighter off to barges in anchorages in order to reduce their drafts to safely transit the 35 foot deep inshore channels. Container vessels cannot lighter in anchorages and therefore must load to less than full depths for long ocean voyages at substantially increased cost. A public notice issued on 16 December 1985, recommended deepening the existing 35 foot navigation channel to 41 feet for 2.1 miles, thence 40 feet for 1.0 mile. These improvements will allow full loading and increased vessel efficiencies. There would also be selected widenings for safety. The estimated project construction cost is $85,500,000, with estimated Federal and non-Federal costs of $52,200,000 and $33,300,000, respectively. The average annual benefits amount to $20,100,000, all for transportation savings, based on the latest evaluation approved in the Board of Engineers for Rivers and Harbors report for Arthur Kill Channel, New York and New Jersey, dated 31 March 1986, at October 1985 price levels. The benefit-cost ratio is 4.2 to 1. The potential local sponsor for the project is the Port Authority of New York and New Jersey.

The project is authorized for construction by the Water Resources Development Act of 1986 with the following cost sharing requirements: local interests will be required to provide relocation of utilities, material disposal areas, bear all costs of terminal facilities, and dredging in berthing areas, estimated at $15,800,000; pay 25 percent of costs allocated to general navigation during construction, estimated at $17,500,000, and pay an additional 10 percent of costs allocated to general navigation, less a credit for the value of lands, easements, rights-of-way, relocations (other than utility relocations), and dredged material disposal areas, within a period of 30 years following completion.

Fiscal Year 1995 funds are being used to continue preconstruction engineering and design, including a reanalysis of the project's economics and initiation of subsurface exploration. The funds requested for Fiscal Year 1996 will be used to continue preconstruction engineering and design, including continuation of subsurface exploration and detailed engineering and design. A completion date is being determined for this preconstruction engineering and design effort.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
b. Beach Erosion Control:					
NEW YORK					
Long Beach Island	1,250,000	0	419,000	525,000	306,000

The project area is located on Long Island from Jones Inlet to East Rockaway Inlet and comprises 9 miles of oceanfront. The major problem along the Long Island coastline is the vulnerability of portions of the beach and adjacent development to direct wave attacks during major storms and hurricanes. Damaging storms have occurred in 1950, 1953, 1960, 1962, 1984, 1991 and 1992. In September 1960, Hurricane Donna forced the evacuation of over 300 families. A recurrence of this storm would result in approximately $20,700,000 in damages based on October 1994 prices and conditions. The recommended plan includes a uniform level of protection against a 100-year storm event for the 9-mile reach of shoreline by raising the beach berm, dune reconstruction, rehabilitation of existing groins, and periodic beach nourishment over the 50-year economic life of the project. The estimated initial project construction cost is $55,300,000, with estimated Federal and non-Federal costs of $35,900,000 and $19,400,000, respectively. The average annual benefits amount to $11,600,000, of which $8,400,000 is for storm damage reduction and $3,200,000 is for recreation, based upon the latest economic analysis dated March 1989. The benefit-cost ratio is 1.7 to 1. The project sponsor is the New York State Department of Environmental Conservation.

Consistent with the cost sharing and financing concepts enacted by the Water Resources Development Act of 1986, local interests will be required to provide lands, easements, rights-of-way and relocations; pay a portion of the initial construction costs allocated to storm damage reduction, so that the total contributions of the local interests is equal to 35 percent of the initial construction cost allocated to storm damage reduction; bear all costs of betterments to the project; pay 35 percent of the costs allocated to periodic nourishment over 50 years; and provide all costs of operation, maintenance and replacement of storm damage reduction facilities.

Fiscal Year 1995 funds are being used to continue into preconstruction engineering and design including remote sensing of the proposed borrow areas, environmental monitoring, beach profile surveys and topographic mapping. Fiscal Year 1996 funds will be used to continue preconstruction engineering and design, including initiation of the detailed plans and specifications. This preconstruction engineering and design effort is scheduled for completion in August 1997.

Project	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
VIRGINIA					
Atlantic Intracoastal Waterway Bridge at Great Bridge	2,000,000	0	1,000,000	1,000,000	0

The Atlantic Intracoastal Waterway is a navigation route parallel to the Atlantic coast between Norfolk, Virginia, and the St. John's River in Florida. The present bridge at Great Bridge, which was built by the Corps of Engineers, was opened to traffic in August 1943. It is a double-swing two-lane highway bridge carrying Virginia's Route 168 traffic over the Albemarle and Chesapeake Canal was adequate at the time it was built for a rural area. However, the bridge now connects a multi-lane highway through a heavily traveled area serving a busy urban commercial center. The bridge is seriously overloaded, carrying double its design capacity and needs new mechanical and electrical equipment. Navigation is also adversely affected due to restrictions on bridge openings. Structural problems have required local officals to lower the maximum vehicle weight on the bridge to 13 tons. A feasibility report was completed in FY 1994. The recommended project, estimated to cost $26,500,000 with an estimated Federal cost of $22,800,000 and an estimated non-Federal cost of $3,700,000, includes replacement of the existing bridge with a five-lane, double-leaf, rolling-lift bascule bridge located approximately 100 feet east of the existing bridge. The average annual benefits amount to $4,230,000, all for transportation. The benefit-cost ratio is 1.9 to 1 based upon the latest economic analysis dated July 1994. The city of Chesapeake, the project sponsor, expressed support for the project in January 1994 and is aware of project cost sharing requirements. In addition, the City has agreed to assume ownership of the bridge and all operation, maintenance, repair, replacement, and rehabilitation responsibilities.

Consistent with the cost sharing and financing concepts enacted by the Water Resources Development Act of 1986, the local interests will be required to provide lands, easements, rights-of-way, relocations, approaches, and any costs associated with widening a small culvert bridge on the north approach roadway, presently estimated at $1,250,000; bear all costs of betterments to the project, presently estimated at $2,450,000; and provide all costs of operation, maintenance of the bridge, presently estimated at $255,000 annually.

Fiscal Year 1995 funds are being used to continue into preconstruction engineering and design, including utility and property line surveys and initiation of plans and specifications. Fiscal Year 1996 funds will be used for completion of preconstruction engineering and design, including completion of plans and specifications, in September 1996.

Project	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
VIRGINIA					
Sandbridge, Virginia Beach	1,250,000	780,000	0 1/	470,000	0

Sandbridge is in the southeastern section of the city of Virginia Beach located along 5 miles of the Atlantic coast of Virginia. The coastline and adjacent development is vulnerable to direct wave attacks during storms and hurricanes. In March 1962, a northeast storm caused $787,000 in damages at March 1962 prices. A recurrence of this storm would cause $16.4 million in damages at October 1994 prices. A November 1994 storm caused $2.5 million in damages. The Division Engineer's notice for the Sandbridge, Virginia Beach, feasibility study was issued in June 1992. The recommended project, estimated to cost $10,100,000, with an estimated Federal cost of $6,500,000, and an estimated non-Federal cost of $3,600,000, includes the construction of a beach berm with an average width of 50 feet and at an elevation of 6.0 feet National Geodetic Vertical Datum (NGVD) along the 5 mile stretch of beach from the Naval Training Facility at Dam Neck to the Back Bay National Wildlife Refuge. Periodic beach nourishment is estimated in 2 year intervals following initial construction. The average annual benefits amount to $3,786,000, all for hurricane and storm damage reduction. The benefit-cost ratio is 1.2 to 1, based upon the latest economic analysis dated June 1992. The city of Virginia Beach, the local sponsor, expressed support for the project in June 1994 and is aware of project cost sharing requirements.

The project is authorized for construction by the Water Resources Development of 1992. In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, local interests will be required to provide lands, easements, and rights-of-way; pay 35 percent of the costs allocated to hurricane and storm damage reduction, and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of the project; and pay 35 percent of the costs allocated to periodic nourishment over 50 years.

Carryover funds from Fiscal Year 1994 are being used to continue preconstruction engineering and design in Fiscal Year 1995, including data collection, surveys and design. Fiscal Year 1996 funds will be used to complete preconstruction engineering and design, including plans and specifications, which is scheduled for completion in September 1996.

1/$24,000 of the amount available for FY 1995 is scheduled as programmed carryover into FY 1996

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
c. Flood Control:					
DISTRICT OF COLUMBIA					
Washington, DC & Vicinity	2,837,000	2,637,000	0	200,000	0

Flooding on the Potomac River at Washington, DC, is affected by both tidal flooding from the Chesapeake Bay and the flood flows on the Potomac River upstream from Washington, DC. Flooding in March 1936 led to estimated damages of $6,530,000 (October 1994 prices) in Washington, DC and the loss of two lives. This damage estimate is based on development existing at the time of the flood. The project, authorized by the Flood Control Act of 1936, primarily consisted of: a wall and levee 2,300 feet long at Potomac Park between the Lincoln Memorial and the Washington Monument with a gap to accommodate an emergency closure structure, and raising a section of P Street, all to protect the downtown Washington area; and a wall and levee 12,900 feet long to protect the Andrews Naval Air Station and Bolling Air Force Base. The project, which was placed in operation in 1940, was constructed to protect against a flood discharge of 700,000 cubic feet per second on the Potomac River. Subsequent to project completion, settlement of P Street occurred and construction in Potomac Park increased the gap in the protection. Due to the experience of the 1942 flood, the Flood Control Act of 1946 authorized improvements to restore the design level of protection and improve the operation of the project. The total effectiveness of the project depends on implementation of the improvements authorized in 1946. At present, project operation continues to require implementation of emergency measures such that the ability of the project to provide the design level of protection is questionable. The estimated project construction cost is $5,100,000 and the average annual benefits amount to $1,752,000, all for flood control. The benefit-cost ratio is 4.5 to 1.

The local sponsor for the modification is the National Park Service which is responsible for providing lands, easements, and rights-of-way. The General Design Memorandum will determine what, if any, project costs are the responsibility of other Federal or non-Federal interests.

Fiscal Year 1996 funds will be used to complete the General Design Memorandum and to prepare plans and specifications for construction. This preconstruction engineering and design effort is scheduled for completion in September 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
MARYLAND					
Anacostia River and Tributaries, MD and DC	2,100,000	0	700,000	1,100,000	300,000

The Anacostia River has a total drainage area of 170 square miles, of which 136 square miles are in Maryland and 34 square miles are in the District of Columbia. The Northeast and Northwest Branches originate in Maryland and flow through several highly urbanized areas before forming the Anacostia River about 9 miles upstream from its junction with the Potomac River. The Corps of Engineers involvement in the basin dates back more than 115 years and includes projects and programs for navigation, flood control, debris removal, and aquatic vegetation control. Two major projects were undertaken. From 1902 through 1940, the District of Columbia portion of the river was channelized, seawalls were built, Kingman Lake and East Lake were constructed, and more than 1,000 acres of mudflats and wetlands were filled with dredged material. The primary purpose of this work was to provide a park for the eastern portion of the city. From 1952 to 1959, a flood control project was constructed in Prince George's County, Maryland, along the Northeast and Northwest Branches and the Anacostia River. A total of 28,000 feet of levees and 14,000 feet of channels were constructed to solve critical flood problems. This effort was successful; however, the construction resulted in a further loss of wetlands and fish and wildlife habitat. The feasibility study was completed in July 1994 and recommended 13 actions to create 80 acres of wetlands, restore 5 miles of stream, and create 33 acres of bottomland habitat within the Anacostia Basin. The recommended project has an estimated total cost of $18,800,000, including an estimated Federal cost of $14,100,000 and an estimated non-Federal cost of $4,700,000. Projects are justified based on their contribution to significant fish and wildlife resources. The project sponsors are the Prince George's County, Montgomery County and the District of Columbia.

Consistent with the cost-sharing and financing concepts enacted by the Water Resource Development Act of 1986, local interests are required to provide all lands, easements, rights-of-way, relocations, and dredged material disposal areas and pay their share of the cost of the project assigned to environmental restoration during construction of the project such that their share is 25 percent.

The Fiscal Year 1995 funds are being used to continue into the preconstruction engineering and design phase to include value engineering, mapping, and plans and specifications. Fiscal Year 1996 funds will be used to continue the preconstruction engineering and design phase to include design efforts towards completing the plans and specifications. This preconstruction engineering and design effort is scheduled for completion in December 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
NEW JERSEY					
Lower Saddle River, Bergen County	6,800,000	5,208,000	629,000	963,000	0

The study area is located along the Saddle River in the communities of Garfield, Wallington, South Hackensack, Lodi, Saddle Brook, Rochelle Park, Paramus and Fair Lawn, New Jersey. Major flooding in recent years has adversely affected over 2,000 residential, commercial and industrial establishments. The plan of improvement was recommended in the Interim Report on Flood Protection Feasibility for the Lower Saddle River Bergen County, New Jersey, which was completed in September 1984. The recommended plan for the Lower Saddle River includes 5.2 miles of channel modification along the Saddle River and 1.7 miles of channel modification along Sprout Brook. A total of 22 bridges would require modification. These improvements would provide protection against a 150 year flood event to over 2,500 structures. The estimated project construction cost is $70,100,000, with Federal and non-Federal costs estimated at $50,400,000 and $19,700,000, respectively. The average annual benefits amount to $5,981,700, all for urban flood damage protection, at October 1985 price levels. The benefit-cost ratio is 1.7 to 1 based upon the latest economic analysis dated June 1993 By letter dated 20 May 1993, the State of New Jersey Department of Environmental Protection indicated a willingness to be the project sponsor and cost-share the project.

The Lower Saddle River, Bergen County New Jersey project is authorized for construction by the Water Resources Development Act of 1986, with the following cost sharing requirements: Local interests will be required to provide lands, easements, rights-of-way and relocations presently estimated at $16,200,000; pay 5 percent of the cost allocated to flood control, presently estimated at $3,500,000; and bear all costs of operation, maintenance and replacement of flood control facilities, presently estimated at $132,000 annually.

Fiscal Year 1995 funds are being used to continue preconstruction engineering and design, including design and cost estimating; and preparing and coordinating the General Design Memorandum. The funds requested for Fiscal Year 1996 will also be used to complete preconstruction engineering and design, including plans and specifications. This preconstruction engineering and design effort is scheduled for completion in September 1996.

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
Raritan River Basin Green Brook Sub-Basin	24,000,000	16,223,000	2,135,000	3,600,000	2,042,000

The Green Brook Sub-Basin project area is located within the Raritan River Basin in north-central New Jersey in Middlesex, Somerset and Union Counties. It drains approximately 65 square miles of primarily urban and industrialized area. On 28 August 1971 Hurricane Doria caused $22,200,000 in damages. Another major storm occurred on 2 August 1973 causing six deaths and resulting in $25,800,000 in damages. At October 1993 prices these damages would be $81,900,000, and $85,900,000 respectively. Hurricane Doria produced the maximum flood of record in the lower portion of the Green Brook Sub-Basin. A Feasibility Report was completed in FY 1980. The recommended plan consists of approximately 15 miles of levees and floodwalls along Green Brook and its tributaries; 6 pumping stations; 12 bridge alterations and approximately 3 miles of stream alignment. Non-structural and environmental features included in the plan are 9 property acquisitions, floodproofing of 33 structures and replanting of 75 to 100 acres in the project ponding areas. The State of New Jersey, the Green Brook Flood Control Commission, and local communities support the authorized plan or a modified version thereof. The estimated project construction cost is $149,000,000, with estimated Federal and non-Federal costs of $101,800,000 and $47,200,000, respectively. The average annual benefits amount to $16,600,000 of which $15,200,000 are urban flood damage prevention and $235,000 are for advance replacement of bridges based on latest evaluation at November 1992 prices. The benefit-cost ratio is 1.3 to 1. By letter dated May 20, 1993, the State of New Jersey, Department of Environmental Protection and Energy, indicated a willingness to be the project sponsor and cost-share the project.

The project is authorized for construction by the Water Resources Development Act of 1986 with the following cost sharing requirements: Local interests will be required to provide lands, easements, rights-of-way, and relocations estimated at $39,700,000, and pay 5 percent cash contribution, presently estimated at $7,500,000 and bear all costs of operation, maintenance and replacement of flood control facilities presently estimated at $114,000 annually.

Fiscal Year 1995 funds are being used to prepare a general reevaluation report which will identify a basin wide National Economic Development Plan and a locally preferred plan and to continue preconstruction engineering and design, for the lower portion of the sub-basin specific technical studies include hydraulic and hydrologic analyses, environmental and cultural investigations, subsurface exploration and data collection. The funds requested for Fiscal Year 1996 will be used to continue the design, and complete the general reevaluation report. This preconstruction engineering and design effort is scheduled for completion in August 1997.

d. Multiple Purpose Power: None

APPROPRIATION TITLE: Construction, General - Channels and Harbors (Navigation)

PROJECT: New York Harbor and Adjacent Channels, Port Jersey Channel, New Jersey (Continuing)

LOCATION: The project is located in New York Harbor five miles southwesterly of the Battery, New York City, and extends from the Anchorage Channel two miles north of Bayonne, New Jersey to form the access channel just north of the Military Ocean Terminal.

DESCRIPTION: Work consists of dredging the access channel to 41 feet from the Federal Anchorage Channel to its head of navigation, providing a turning basin at the head of navigation, and bulkheading portions of the turning basin. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1986.

REMAINING BENEFIT - REMAINING COST RATIO: 9.0 to 1 at 8 percent.

TOTAL BENEFIT - COST RATIO: 9.0 to 1 at 8 percent.

INITIAL BENEFIT - COST RATIO: 9.0 to 1 at 8 percent (FY 1996)

BASIS OF BENEFIT - COST RATIO: Benefits are from the General Design Memorandum approved in May 1993 at October 1991 prices.

SUMMARIZED FINANCIAL DATA:			ACCUM PCT.OF EST. FED COST	STATUS (1 Jan 1995)	PERCENT COMPLETED	PHYSICAL COMPLETION SCHEDULE
Estimated Appropriation Requirement (CoE)		$ 15,360,000		Contract 1	0	being determined
Estimated Appropriation Requirement (U.S. Coast Guard)		5,000		Contract 2	0	being determined
Estimated Total Appropriation Requirement		15,365,000		Entire Project	0	being determined
Future Non-Federal Reimbursement		2,050,000				
Estimated Federal Cost (Ultimate)		13,315,000				
Estimated Non-Federal Cost		7,255,000				
Cash Contribution	5,120,000			PHYSICAL DATA		
Other Costs	85,000			Deepening channel to 41 feet mlw,		
Reimbursements	2,050,000			providing a turning basin, and		
				bulkheading portions of the turning		
Total Estimated Project Cost		$ 20,570,000		basin		

Division: North Atlantic District: New York New York Harbor and Adjacent Channels, Port Jersey Channel, NJ

SUMMARIZED FINANCIAL DATA: (Continued)

		ACCUM PCT. OF EST. FED COST
Allocations to 30 September 1994	$ 2,338,000	
Conference Allowance for FY 1995	300,000	
Allocation for FY 1995	253,000 1/	
Allocation through FY 1995	2,591,000	17
Allocation Requested for FY 1996	550,000	20
Programmed Balance to Complete after FY 1996	12,219,000	
Unprogrammed Balance to Complete after FY 1996	0	

1/ Reflects $47,000 reduction assigned as savings and slippage, and $200,000 programmed carryover into FY 1996

JUSTIFICATION: Cargo handled at Global Marine Terminal was about 1 million tons in 1990, which included heavy machinery, electronic equipment, waste paper, and rags. The terminal serves 12 major shipping lines. The present 35-foot channels in the Port Jersey Channel preclude present generation containerships from fully loading and will further hamper future fleets of larger draft vessels. Over the last 12 years an average of 263 deep draft ships and 60 barges called at Global Marine Terminal. The average annual benefits, all commercial navigation, are $15,732,000 at October 1991 prices.

FISCAL YEAR 1996: The total program, including the requested and programmed carryover amounts of $550,000 and $200,000 respectively will be applied as follows:

Planning, Engineering, and Design	$ 750,000
Total	$ 750,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Dredging berthing areas and relocate utilities where necessary in the construction of the project.	$ 85,000	$ 12,100
Pay 25 percent of the costs allocated to deep draft navigation during construction.	5,120,000	
Pay an additional 10 percent of the costs allocated to deep draft navigation within a period of 30 years following completion of construction which is partially offset by a credit allowed for the value of lands, easements, rights of way, relocation, (except utility relocations), and dredged material disposal areas.	2,050,000	
Total Non-Federal Costs	$ 7,255,000	$ 12,100

The non-Federal sponsor has also agreed to repay its share of construction costs during construction and reimburse its share of construction costs over a period of 30 years following completion of construction.

STATUS OF LOCAL COOPERATION: The Port Authority of New York and New Jersey and the State of New Jersey by letters, dated 22 October 1991 and 29 March 1993, respectively, indicated the intent of the Port Authority to act as the local sponsor on behalf of the State of New Jersey.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate is $15,360,000 is an increase of $160,000 over the latest estimate ($15,200,000) submitted to Congress (FY 1995). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	$160,000
Total	$160,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement (EIS) was filed with the Environmental Protection Agency (EPA) on 29 April 1988.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1988 and funds to initiate construction were appropriated in FY 1994. Bioassay testing results in the vicinity of the authorized project have indicated that the sediment is unsuitable for ocean disposal. FY 95 funds will be used to retest the sediments based upon new toxicity testing procedures and organisms. New testing procedures have recently been developed that are substantially more costly to perform. Completion of the required testing is scheduled for June 1995

APPROPRIATION TITLE: Construction, General - Navigation, Channels and Harbors

PROJECT: Salem River, NJ (Continuing)

LOCATION: Salem River is a tributary of the Delaware River and is located approximately 50 miles southwest of the City of Philadelphia.

DESCRIPTION: The plan of improvement calls for deepening a navigation channel to 16 feet mean low water, widening, providing a turning basin, partial channel realignment, and mitigation to compensate for wetlands and shallow water habitat lost. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1986.

REMAINING BENEFIT-REMAINING COST RATIO: 1.8 to 1 at 8 percent.

TOTAL BENEFIT-COST RATIO: 1.8 to 1 at 8 percent.

INITIAL BENEFIT-COST RATIO: 1.7 to 1 at 8 1/2 percent (FY 1994).

BASIS OF BENEFIT-COST RATIO: Design Memorandum Supplement dated September 1994 at October 1994 price levels

SUMMARIZED FINANCIAL DATA:

Estimated Total Appropriation Requirement			$ 6,826,000
Estimated Future Non-Federal Reimbursement			85,000
Estimated Federal Cost (Ultimate)			6,741,000
Estimated Coast Guard			20,000
Estimated Non-Federal Cost			$ 2,399,000
Cash Contributions		758,000	
Other Costs		1,556,000	
Reimbursements		85,000	
Navigation	85,000		
Total Estimated Project Cost			$ 9,160,000

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Channel	0	Jun 1996
Entire Project	0	Jun 1996

PHYSICAL DATA :
Channel: Deepening to 16 feet MLW, widening, providing a turning basin, and mitigation to compensate for wetlands and shallow water habitat lost.

SUMMARIZED FINANCIAL DATA: (CONT)		ACCUM. PCT. OF EST. FED COST
Allocations to 30 September 1994	2,250,000	
Conference Allowance for FY 1995	1,000,000	
Allocation for FY 1995	1,000,000	
Allocations through FY 1995	3,250,000	45
Allocation Requested for FY 1996	3,576,000	100
Programmed Balance to Complete after FY 1996	0	
Unprogrammed Balance to Complete after FY 1996	0	

JUSTIFICATION: The existing 12 foot MLW project was adopted in 1925 and provides for an entrance channel from the Delaware River to the fixed Route 45 highway bridge in Salem, New Jersey; a distance of about five miles. The existing authorized dimensions are 150 feet wide from the Delaware River through Salem Cove narrowing to 100 feet at the cutoff at Sinnickons Landing. The existing project does not provide adequate depths to permit efficient transit of vessels, necessitating costly shipping practices of lightloading, tidal delays and use of smaller ships than those which the terminal can accommodate. Traffic averages 163,000 tons with commodities consisting of general cargo, grain, scrap iron and perishables. The average annual benefits, all commercial navigation, are $2,033,000 based on October 1994 prices levels at an average annual cost of $1,125,000.

FISCAL YEAR 1996: The requested amount will be applied as follows:

Construction Completion	$ 3,219,000
Planning Engineering and Design	71,000
Construction Management	286,000
TOTAL	$ 3,576,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance and Replacement Costs
Provide lands, easements, rights-of-way	$ 673,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	883,000	
Pay 10 percent of the costs allocated to general navigation.	758,000	$29,000
Reimburse an additional 10 percent of costs of general navigation features allocated to commercial navigation within a period of 30 years following completion of construction as partially reduced by a credit allowed for the value of lands, easements rights of way, relocation, and dredged or excavated material disposal areas provided for commercial navigation. 85,000		
Total Non-Federal Cost	$2,399,000	$29,000

STATUS OF LOCAL COOPERATION: The South Jersey Port Corporation, the non-Federal sponsor, indicated their intention to execute the Project Cooperation Agreement and that funds for the non Federal share had been established for the project by letter dated 26 August 1994. The Project Cooperation Agreement is scheduled to be executed in April 1995.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $6,826,000 (COE) is a decrease of $1,934,000 over the latest estimate ($8,760,000) presented to Congress (FY 1995). This change includes the following items:

Item		Amount
Price Escalation on Construction Features	- $	420,000
Change of project scope	- $	1,514,000
Total	- $	1,934,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A Finding of No Significant Impact (FONSI) was signed on 13 May 1991, with the FONSI on the EA Supplemental regarding the modified mitigation plan, signed on 31 August 94.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1990 Funds to initiate construction were appropriated in FY 1994.

APPROPRIATION TITLE: Construction, General - Channels and Harbor (Navigation)

PROJECT: New York Harbor Collection and Removal of Drift, New York and New Jersey (Continuing)

LOCATION: The project covers all of the Port of New York including shores and tidal tributaries of Sandy Hook and Raritan Bays, Raritan River, Arthur Kill, Kill Van Kull, Lower New York Bay, Passaic and Hackensack Rivers, Upper New York Bay, Lower Hudson River, Harlem and East Rivers, the western part of Long Island Sound, and Jamaica Bay. It encompasses seven New Jersey and seven New York counties. The port embraces about 1,500 square miles. It has frontage of 755 miles measured along the shoreline of its navigable waters of which 460 miles are in New York and 295 miles are in New Jersey.

DESCRIPTION: The project plan consists of demolition and disposal of derelict vessels, debris along the shores, and unoccupied deteriorated shore structures, and repair of occupied deteriorated structures throughout the Port of New York to reduce hazards to navigation by removing the potential sources of drift at the source and also to restore the shores of New York harbor to full use. The programmed portion of the project consists of the completed reaches shown in the status listing and the Weehawken-Edgewater 2 in New Jersey and the Brooklyn 2A reach in New York. All other work is unprogrammed.

AUTHORIZATION: Water Resources Development Act of 1974, Water Resources Development Act of 1976, Supplemental Appropriations Act of 1987, and Water Resources Development Act of 1988.

REMAINING BENEFIT-REMAINING COST RATIO: 3.6 to 1 at 5 7/8 percent.

TOTAL BENEFIT-COST RATIO: 3.6 to 1 at 5 7/8 percent.

INITIAL BENEFIT-COST RATIO: 6.3 to 1 at 5 7/8 percent (FY 1975).

BASIS OF BENEFIT-COST RATIO: Benefits are based on a March 1991 Economic Reanalysis Report, revised in July 1991, at December 1990 price levels, that analyzed the economic viability of completing the project as proposed in the 1975 Phase I General Design Memorandum.

SUMMARIZED FINANCIAL DATA:

Estimated Federal Cost			$127,000,000
Programmed Construction		46,150,000	
Unprogrammed Construction		80,850,000	
Estimated Non-Federal Cost			146,000,000
Programmed Construction		46,677,000	
Cash Contribution	$ 20,447,000		
Other Costs	26,230,000		
Unprogrammed Construction		99,323,000	
Cash Contribution	43,053,000		
Other Costs	56,270,000		
Total Estimated Programmed Construction Cost			92,827,000
Total Estimated Unprogrammed Construction Cost			180,173,000
Total Estimated Project Cost			$ 273,000,000

		ACCUM. PCT. OF EST. FED COST	STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Allocations to 30 September 1994	44,860,000				
Conference Allowance for FY 1995	290,000		Liberty State Park 1-5, NJ	100	
Allocation for FY 1995	244,000	1/	East River, NY	100	
Allocations through FY 1995	45,104,000	2/ 35	East River, Piers 17-18,NY	100	
Allocations Requested for FY 1996	100,000	36	Elizabeth, NY	100	
Programmed Balance			Stapleton, Staten Island,NY	100	
to Complete after FY 1996	946,000		Hoboken, NJ	100	
Unprogrammed Balance			Bayonne 1, NJ	100	
to complete after FY 1996	80,850,000		Bayonne 2, NJ	0	being determined
			Hoboken Pier B, NJ	100	
			Weehawken-Edgewater 1, NJ	100	
			Weekawken-Edgewater 2, NJ	100	
			Weehawken-Edgewater 2A,NJ	50	Sep 95
			Jersey City North 1, NJ	100	
			Jersey City North 2, NJ	100	

1/ Reflects $46,000 reduction for savings and slippage

2/ Reflects $3,475,000 in programmed carryover into FY 1996

STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Jersey City South, NJ	100	
Brooklyn 1, NY	100	
Brooklyn 2A, NY	10	Mar 97
Brooklyn 2B, NY	0	being determined
Shooters Island, NY & NJ	0	being determined
Arthur Kill, NJ	0	being determined
Arthur Kill, NJ	0	being determined
Passaic River, NJ	0	being determined
Jamaica Bay, NY	0	being determined
Kill Van Kull,Staten Is, NY	0	being determined
Manhattan, NY	0	being determined
Entire Project	33	Mar 1997 1/

1/ For programmed work only; remaining work is unprogrammed pending a decision to construct these features

PHYSICAL DATA

Collect and remove sources of drift from New York Harbor Sources of drift include deteriorated piers and wharfs, other deteriorated non-repairable structures, debris lying along the shores, repairable piers and wharfs, and other repairable shore structures.

JUSTIFICATION: In spite of the existing Federal program for collection and removal of drift in navigable harbor waters, an estimated 17,800 commercial, public, and recreational vessels collide with drift annually, causing damage to propellers, shafts, and hulls. Average annual repair costs and other economic losses for 1990 are estimated to exceed $52,700,000. Drift clutters recreational shores, menaces swimmers, and spreads marine borer infestation. The sources of drift deface the waterfront, prevent optimum use of property and depress property values. Fire hazards would be reduced by removing the unused deteriorated shore structures. Uncontrolled burning of inflammable material adds to the existing air pollution problem. Elimination of drift from sources such as deteriorated shore structures and debris lying along shores would contribute to reduced water pollution by decreasing the available amount of organic material in

JUSTIFICATION: (cont'd)
harbor waters. The piers which would be repaired or removed under the improvement presently constitute a hazard to employees working on those structures, are an unattractive nuisance, and are a potential area for injuries or loss of life. The project would improve existing conditions in the harbor and meet immediate and future needs of commercial vessels and recreational boating. Upon completion of improvements, the States of New Jersey and New York, respectively, will be responsible for enforcing laws controlling sources of drift.

The average annual benefits are as follows:

Benefits	Amount
Commercial and Public Vessels (Damages Prevented)	$ 41,220,000
Recreational Boats	45,988,000
Marina Cleanup	2,503,000
Cleaning Shoreline of Drift	5,036,000
Real Estate Enhancement	229,000
Enhanced Recreational Experience	246,000
Benefits from Pier Repairs	4,747,000
TOTAL	$ 99,969,000

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $100,000 and $3,475,000, respectively, will be applied as follows:

Continue construction of Brooklyn 2A Reach	$ 2,350,000
Planning, Engineering and Design:	
Brooklyn 2B Reach	100,000
Shooters Island Reach	127,000
Bayonne 2 Reach	190,000
Arthur Kill, NJ Reach	125,000
Arthur Kill, NY Reach	175,000
Kill Van Kull, NY Reach	78,000
Passaic River, NJ Reach	230,000
Construction Management:	
Brooklyn 2A Reach	400,000
TOTAL	$3,575,000

NON-FEDERAL COST: In accordance with the authorizing legislation, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Pay 33 1/3 percent of the costs allocated to navigation.	$ 63,500,000	
Pay all costs associated with repair and maintenance of structures.	82,500,000	
Total Non-Federal Costs	$ 146,000,000	$0

The non-Federal sponsors have also agreed to make all payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The New York State Department of Environmental Conservation is the non-Federal sponsor for all work in New York State. Local Cooperation Agreements (PCA's) for the East River, Stapleton, and Brooklyn 1 reaches were executed in December 1979, July 1983, and August 1984, respectively. The New Jersey Department of Environmental Protection is the non-Federal sponsor for all work in New Jersey. PCA's for Elizabeth, Hoboken, Jersey City South, Weehawken to Edgewater, and Bayonne reaches were executed in October 1982, June 1984, August 1984, and April 1986, respectively. A PCA for the Jersey City North reach was executed in September 1987 with the New Jersey Department of Environmental Protection and modified in March 1992. A PCA for the Brooklyn 2A reach is scheduled to be executed in September 1995 with the New York State Department of Environmental Conservation.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $127,000,000 is an increase of $2,000,000 from the latest estimate ($125,000,000) presented to Congress (FY 1995). This change include the following items:

Item	Amount
Price Escalation on Construction Features	$ 2,000,000
Total	$ 2,000,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement for the overall project and Liberty State Park Area 1 was filed with the Council on Environmental Quality on 26 March 1976. An Environmental Assessment is included in the General Design Memorandums for the Jersey City North and Brooklyn 2 reaches.

OTHER INFORMATION: Funds were appropriated to initiate preconstruction engineering and design in FY 1974 and funds were appropriated to initiate construction in FY 1975.

APPROPRIATION TITLE: Construction, General - Channels and Harbors (Navigation)

PROJECT: Norfolk Harbor and Channels (Deepening), Virginia, (Continuing)

LOCATION: The project is located in Hampton Roads, Virginia, a 25-square mile natural harbor serving the ports of Norfolk, Newport News, Portsmouth, Chesapeake, and Hampton, Virginia.

DESCRIPTION: Programmed work encompasses deepening a 2.5 mile section of the Southern Branch of the Elizabeth River to a depth of 45 feet, to include an 800 foot turn basin, and the construction of a 1500 foot diameter anchorage area with a depth of 50 feet. Unprogrammed work encompasses deepening the outbound lanes of existing main channels to a depth of 55 feet, constructing a new ocean channel to a depth of 60 feet, and deepening a 6.3 mile section of the Southern Branch to a depth of 45 feet. Dredging the outbound channels to a depth of 50 feet was completed in 1988, and the Lower Bay Beneficial Uses Study was completed in August 1994.

AUTHORIZATION: Supplemental Appropriations Act of 1985, and Water Resources Development Act of 1986.

REMAINING BENEFIT-REMAINING COST RATIO: 1.6 to 1 at 8 1/8 percent.

TOTAL BENEFIT-COST RATIO: 1.6 to 1 at 8 1/8 percent.

INITIAL BENEFIT-COST RATIO: 3.7 to 1 at 8 1/8 percent (FY 1985).

BASIS OF BENEFIT-COST RATIO: Benefits are from the General Design Memorandum approved in July 1986 at October 1986 price level and the Supplemental Engineering Report approved in August 1989 at October 1989 price level.

SUMMARIZED FINANCIAL DATA:

Estimated Appropriation Requirement (CoE)		$137,400,000
Programmed Construction	26,661,000	
Unprogrammed Construction	110,739,000	
Estimated Appropriation Requirement (Coast Guard)		833,000
Programmed Construction	306,000	
Unprogrammed Construction	527,000	

STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
50 feet Outbound	100	Dec 1988
55 feet Outbound (Anchorage)	-0-	being determined
Southern Branch 45'	-0-	being determined
Southern Branch 40'	3	being determined
Entire Project	13	being determined

SUMMARIZED FINANCIAL DATA (continued):

				ACCUM. PCT.OF EST. FED COST
Estimated Appropriation Requirement (US Navy)			3,508,000	
Programmed Construction		3,508,000		
Unprogrammed Construction		0		
Estimated Total Appropriation Requirement			141,741,000	
Programmed Construction		30,475,000		
Unprogrammed Construction		111,266,000		
Future Non-Federal Reimbursement			11,433,000	
Programmed Construction		999,000		
Unprogrammed Construction		10,434,000		
Estimated Federal Cost (Ultimate)			130,308,000	
Programmed Construction		29,476,000		
Unprogrammed Construction		100,832,000		
Estimated Non-Federal Cost			132,392,000	
Programmed Construction		14,464,000		
Cash Contribution	9,564,000			
Other Costs	3,901,000			
Reimbursements	999,000			
Unprogrammed Construction		117,928,000		
Cash Contribution	84,336,000			
Other Costs	23,158,000			
Reimbursements	10,434,000			
Total Estimated Programmed Construction				43,940,000
Total Estimated Unprogrammed Construction				218,760,000
Total Estimated Project Cost				262,700,000

PHYSICAL DATA:

CHANNELS	DEPTH (feet m.l w)	WIDTH (feet)	LENGTH (miles)
Atlantic Ocean	60	650	9.6
Thimble Shoal	55	650	13.4
Norfolk Harbor	55	650-800	8.4
Newport News	55	800	6.2
Elizabeth River and Southern Branch	45	375-750	6.3
Southern Branch	40	250-500	2.5

ANCHORAGES	DEPTH (ft. m.l w.)	RADIUS (feet)
55 Feet	55	1,500
Sewells Point	45	1,500

Division: North Atlantic District: Norfolk Norfolk Harbor and Channels (Deepening), VA

SUMMARIZED FINANCIAL DATA: (Cont)		ACCUM. PCT. OF EST FED COST
Allocations to 30 September 1994	17,251,000	
Conference Allowance for FY 1995	1,200,000	
Allocation for FY 1995	1,010,000 1/	
Allocations Through FY 1995	18,261,000	13
Allocation Requested for FY 1996	600,000	14
Programmed Balance to Complete after FY 96	7,800,000	
Unprogrammed Balance to Complete after FY 96	110,739,000	

1/ Reflects $190,000 reduction for savings and slippage and $600,000 in programmed carryover into FY 96

JUSTIFICATION: The existing channels in the Port of Hampton Roads are not deep enough to accommodate the increasing vessel sizes which transport principal commodities such as coal and grain. Hampton Roads coal terminals already receive colliers in excess of 100,000 deadweight tons which cannot sail fully loaded with the existing channels 50 feet deep making unit transportation costs higher. When the project is completed, larger vessels will be able to load to capacity, providing a savings in the delivery of cargo to final destinations. The project will assist in improving the United States competitive position as a major coal exporter. Average annual benefits are as follows:

BENEFITS	AMOUNT
Transportation Savings (50 feet Outbound)	$26,400,000
Transportation Savings (55 feet Outbound)	22,200,000
Transportation Savings (Southern Branch - 45 feet)	3,499,000
Transportation Savings (Southern Branch - 40 feet)	2,550,000
Total Benefits	$54,649,000

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $600,000 and $600,000, respectively, will be applied as follows:

Planning, Engineering and Design:	
Elizabeth River Southern Branch	$ 800,000
55 feet Outbound (Anchorage)	400,000
TOTAL	$1,200,000

NON-FEDERAL COSTS: In accordance with the cost-sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Pay Craney Island dredged material disposal area tolls.	$ 575,000	
Pay the costs of improvements to access channels and berthing areas ($2,987,000) and relocate a 30 inch diameter water main ($339,000).	3,326,000	
Pay 50 percent of the costs allocated to deep draft navigation greater than 45 feet during construction and pay 25 percent of the costs of incremental maintenance below 45 feet below mean low water.	9,564,000	$150,000
Pay an additional 10 percent of the costs allocated to deep draft navigation within a period of 30 years following completion of construction (which is partially offset by relocation of the 30 inch diameter water main and a credit allowed for the Craney Island dredged material area tolls).	999,000	
TOTAL Non-Federal Costs (50 Feet Outbound Element)	$14,464,000	$150,000

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Remaining Elements:		
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary in the construction of the project.	$23,158,000	
Pay 50 percent of the costs allocated to deep draft navigation greater than 45 feet during construction and pay 25 percent of the costs of incremental maintenance below 45 feet mean low water.	84,336,000	
Pay an additional 10 percent of the costs allocated to deep draft navigation within a period of 30 years following completion of construction.	10,434,000	
Subtotal Non-Federal Costs (Remaining Elements)	$117,928,000	$ 0
Total Non-Federal Costs	$132,392,000	$150,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction and reimburse its share of construction costs over a period of 30 years following completion of construction.

STATUS OF LOCAL COOPERATION: A Local Cooperation Agreement (LCA) for the first phase (50 feet Outbound) was executed 15 May 1986 with the Commonwealth of Virginia, and LCA Modification No. 1 was executed 13 February 1987 to reflect the criteria of the Water Resources Development Act of 1986. Supplements to the existing LCA will be executed to accommodate completion of future elements. The supplemental PCA for the 50 foot anchorage is currently scheduled to be executed in September 1997.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal (CoE) cost estimate of $137,400,000 is the same as the latest estimate ($137,400,000) presented to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement (FEIS) and Addendum were filed on 3 April 1981. A final Supplement I to the FEIS was filed on 14 June 1985. An Environmental Assessment is scheduled for completion in February 1996 for the 50 foot anchorage.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1985. The first phase of the project provided an outbound channel 50 feet deep. The Inbound 50 and 55 feet Channel phases have been deferred due to the absence of currently identified economic or operational need. The remainder of the project will be programmed in coordination with local interests. The Virginia Port Authority has expressed support for new starts of the 55 feet and Southern Branch elements in letters dated July 26, 1989 and June 20, 1989. While the Commonwealth strongly supports the 55 feet project, design efforts were temporarily suspended in 1990 due to Virginia's budgetary constraints. A long-term dredged material management study was initiated in FY 1985. This study concentrated on the needs of the inner harbor and was completed in FY 1994. In letters dated 27 September 1990 and 8 January 1992, the Virginia Port Authority confirmed the Commonwealth's support for the Southern Branch and provided assurances that they would be a cost-sharing partner for the remaining elements when a decision is made to construct these features. The Virginia Port Authority has also expressed interest in the 50' Anchorage improvements to the 50' Outbound Element in a letter dated 10 June 1993.

APPROPRIATION TITLE: Construction General - Local Protection (Flood Control)

PROJECT: Delaware Coast Protection, Delaware (Continuing)

LOCATION: The project is located in Sussex County, Delaware, on the Atlantic Ocean at Indian River Inlet.

DESCRIPTION: The plan of improvement consists of constructing a sand bypassing plant and periodic nourishment of a feeder beach at Indian River Inlet. All work is programmed.

AUTHORIZATION: Flood Control Act of 1968 and the Water Resources Development Act of 1986.

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable because initial construction is complete.

TOTAL BENEFIT-COST RATIO: Not applicable because initial construction is complete.

INITIAL BENEFIT-COST RATIO: 2.0 to 1 at 6 1/8 percent (FY 1977).

BASIS OF BENEFIT-COST RATIO: Atlantic Coast of Delaware General Design Memorandum, approved January 1986 at October 1984 price levels and a Reevaluation Report approved February 1984 at October 1983 price levels.

SUMMARIZED FINANCIAL DATA:

Estimated Federal Cost			$12,100,000
Initial Construction	2,266,000		
Periodic Nourishment	9,834,000		
Estimated Non-Federal Cost			17,300,000
Initial Construction		$ 441,000	
Cash Contributions	441,000		
Other Costs	0		
Periodic Nourishment		16,859,000	
Cash Contributions	0		
Other Costs	16,859,000		

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Initial Construction	100	
Periodic Nourishment	17	Being determined
Entire Project	48	Being determined

PHYSICAL DATA:
Project Area Length: 3,500 feet sand bypass plant designed to provide the necessary volume of sand to the feeder beach. Feeder beach requires bypassing an average of 100,000 cubic yards each year.

SUMMARIZED FINANCIAL DATA: (Cont)				ACCUM. PCT. OF EST. FED COST
Total Estimated Project Cost		29,400,000		
Initial Construction	2,707,000			
Periodic Nourishment	26,693,000			
Allocations to 30 September 1994		4,416,000		
Conference Allowance for FY 1995		195,000		
Allocation for FY 1995		164,000	1/	
Allocations through FY 1995		4,580,000	2/	38
Allocation Requested for FY 1996		0		40
Programmed Balance to Complete after FY 1996		7,520,000		
Unprogrammed Balance to Complete after FY 1996		0		

1/ Reflects $31,000 assigned as savings and slippage.
2/ Reflects $205,000 in programmed carryover into FY 1996.

JUSTIFICATION: The reach of shoreline immediately north of Indian River Inlet, commonly referred to as the feeder beach, is being damaged by erosion, and State Highway Route 1 is threatened. The project area has also experienced considerable erosion from waves due to hurricanes and northeasters as a result of the lack of adequate protective beaches. The critical length of shoreline north of Indian River Inlet along which erosion threatens Route 1 is extremely important because it provides the only direct roadway between Bethany Beach and the northern beaches. There would be severe negative social and economic impacts if Route 1 were to be cut by a washover. The authorized project would provide tangible benefits by providing beach erosion control measures which in turn reduce annual beach erosion maintenance costs and reduce wave damages from coastal storms. The average annual benefits are $9,549,200 based on 1 October 1984 price levels, of which $9,121,100 are for prevention of erosion damages and $428,100 are for prevention of loss of land.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $0 and $205,000 respectively, will be applied as follows:

Periodic Nourishment	$ 160,000
Planning, Engineering, and Design	35,000
Construction Management	10,000
Total	$ 205,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal Sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Bear 35 percent of the costs allocated to periodic nourishment, and bear all costs of operation, maintenance and replacement of shoreline protection features.	$17,300,000	$110,000
Bear 100 percent of operation, maintenance, and replacement for mitigation of shore damages attributable to navigation projects.		185,000
Total Non-Federal Costs	$17,300,000	$295,000

STATUS OF LOCAL COOPERATION: A Local Cooperation Agreement was executed in October 1988 with the State of Delaware. The current non-Federal estimated cash contribution of $17,300,000 for programmed work reflects an increase of $7,450,000 from the estimate of $9,850,000 included in the Local Cooperation Agreement, reflecting a decrease of $13,000 for actual contract award amounts and an increase of $7,463,000 for the inclusion of inflation for periodic nourishment costs through the construction period. The non-Federal sponsor has indicated that it is financially capable and willing to contribute the increased non-Federal share. Our analysis of the non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $12,100,000 is a decrease of $500,000 from the last estimate ($12,600,000) presented to Congress (FY 1995). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	- $500,000
Total	- $500,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement (FEIS) was filed with the Council on Environmental Quality on 1 June 1971. A draft supplement to the FEIS was filed on 18 April 1975. An Environmental Assessment and a Finding of No Significant Impact were completed on 26 November 1984. Listing of Piping Plover (Charadrius Melodus) as an endangered bird species in January 1986 and recent determination by State wildlife officials that the species nests in the project area has necessitated review procedures in accordance with Section 7 of the Endangered Species Act of 1973. A letter from U.S. Fish and Wildlife Service, dated 4 May 1987, expressed no impact, provided an operational window is observed. Coordination with the Service is continuing.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1971, and funds to initiate construction were appropriated in FY 1977. Section 869 of the Water Resources Development Act of 1986 deauthorized the unprogrammed portion of the project. The initial construction was cost shared 78.1 percent Federal and 21.9 percent non-Federal. The Federal Government will provide 40.7 percent of the annual cost of operation and maintenance of the plant as its contribution to periodic nourishment of the beach for the remaining authorized periodic nourishment period.

APPROPRIATION TITLE: Construction, General - Beach Erosion Control

PROJECT: Sandy Hook to Barnegat Inlet, NJ (Continuing)

LOCATION: The overall project area lies along the Atlantic Ocean shoreline of New Jersey in Monmouth and Ocean Counties between Sandy Hook to the north and Barnegat Inlet to the south. Section I - The Sea Bright to Ocean Township section lies solely within Monmouth County. The Sea Bright to Ocean Township section is the northernmost 12 miles of the project, which includes the following communities: Sea Bright, Monmouth Beach, Long Branch, Deal, Allenhurst, and Ocean Township. Section II - Asbury Park to Manasquan section comprises the southern portion of Monmouth County and is approximately 9 miles long. It includes the following communities: Asbury Park, Ocean Grove, Bradley Beach, Avon-by-the Sea, Belmar, Spring Lake, Sea Girt, State Encampment, and Manasquan.

DESCRIPTION: The recommended plan for Section I, Sea Bright to Ocean Township, includes construction of a 100-foot-wide-berm at an elevation of 10 feet above mean low water with an additional 2-foot-high-storm-berm cap along the entire 12 miles of project shoreline extending from Sea Bright to Ocean Township. The recommended plan for Section II, Asbury Park to Manasquan, includes construction of a berm 100 feet wide at an elevation of 8.4 feet above mean low water. The project identified for Section II is still subject to modification based on the successful completion of the preconstruction engineering and design effort. All work on Sections I and II is programmed. Section III, Point Pleasant to Seaside Park, was Deauthorized.

AUTHORIZATION: River and Harbor Act of 3 July 1958 for Sections I and II, Water Resources Development Act of 1986, and the Water Resources Development Act of 1988.

REMAINING BENEFITS-REMAINING COST RATIO: The benefit cost ratio is 1.6 to 1 at 8 1/8 percent.

TOTAL BENEFIT-COST RATIO: The benefits cost ratio is 1.6 to 1 at 8 1/8 percent.

INITIAL BENEFIT-COST RATIO: The benefit cost ratio is 1.5 to 1 at 8 1/8 percent (FY 1985).

BASIS OF BENEFIT-COST RATIO: Benefits are from the analysis contained in General Design Memorandum revised March 1990 at June 1988 price levels. For Section II, Asbury Park to Manasquan Inlet benefits are from the General Design Memorandum dated May 1994 at June 1992 price levels.

SUMMARIZED FINANCIAL DATA:

				ACCUM. PCT. OF EST. FED. COST
Estimated Federal Cost			$1,104,900,000	
Initial Construction		185,192,000		
Periodic Nourishment		919,708,000		
Estimated Non-Federal Cost			595,300,000	
Initial Construction		82,922,000		
Cash Contributions	67,822,000			
Other Costs	15,100,000			
Periodic Nourishment		512,378,000		
Cash Contributions	512,378,000			
Other Cost	0			
Total Estimated Project Cost			$1,700,200,000	
Initial Construction		268,114,000		
Periodic Nourishment		1,432,086,000		

Allocations to 30 September 1994	$ 45,080,000	
Conference Allowance for FY 1995	13,100,000	
Allocation for FY 1995	11,027,000 1/	
Allocations through FY 1995	56,107,000	5
Allocation Requested for 1996	15,700,000	6
Programmed Balance to complete after FY 1996	1,033,093,000	
Unprogrammed Balance to complete after FY 1996	0	

STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Sea Bright to Ocean Township	0	being determined
Asbury Park to Manasquan	0	being determined
Entire Project	0	being determined

PHYSICAL DATA

Sea Bright to Ocean Township: Beach placement over 12 miles; notching existing groins.

Asbury Park to Manasquan: Beach placement over 9 miles

1/ Reflects $2,073,000 reduction for savings and slippage, and $9,400,000 in programmed carryover into FY 96

JUSTIFICATION: Erosion has seriously reduced the width of most beaches in the study area with consequent exposure of shore to storm damage. Because of this erosion of the shore, the area does not provide sufficient recreational beaches for the proper accommodation of the present and prospective tributary population The State of New Jersey and mayors of affected communities are very concerned over the increased potential for damages to structures due to the eroded condition of the existing beaches. The March 1962 storm caused $40,400,000 in damages (October 1993 price levels) along the twenty five mile stretch of shore from Sandy Hook to Manasquan Inlet. Subsequent emergency restoration works in

JUSTIFICATION (continued)

this reach cost $7,383,000 (October 1988 price levels). In Section I the restored beach has eroded while the area behind the seawall is more densely developed. Section II suffers from eroding beaches also. The storms of 30 and 31 October 1991, and 3 to 5 January 1992, caused $6,500,000 in damages to shore structures and the small beach seaward of the recently rebuilt state seawall within the project area. The rebuilt seawall was overtopped by the significant ocean waves, and its seaward toe is severely threatened by undercutting and collapse because of the lack of beach. The average annual benefits from erosion control measures are $53,151,000. For Section II, the average annual benefits from erosion control measures are $11,878,000.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts $15,700,000 and $9,400,000, respectively, will be applied as follows:

Section I, Seabright-Ocean Township	
Complete Contract 1a	$ 1,700,000
Continue Contract 1b	10,830,000
Initiate Contract 2	4,700,000
Planning, Engineering, and Design	300,000
Construction Management	1,770,000
SECTION II, Asbury Park To Manasquan	
Initiate Contract I	$ 5,100,000
Planning, Engineering, and Design	120,000
Construction Management	580,000
Total	$25,100,000

NON-FEDERAL COSTS: Consistent with the Water Resources Development Act of 1988, the non-Federal share of the first $40,000,000 of construction of the Sea Bright to Ocean Township reach consists of monies expended by non-Federal interests for reconstruction of the seawall at Sea Bright and Monmouth Beach, New Jersey. Cost sharing of the project, in excess of the first $40,000,000 increment, is in accordance with Title I of the Water Resources Development Act of 1986. Section I requirements also include lands, easements, rights-of-way and relocations. In Section II, the non-Federal share includes a cash contribution plus lands, easements, rights-of-way, and relocations. The combined Section I and Section II requirements follow:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance and Replacement Costs
Provide all lands, easements, and rights of way, and relocations for Sections I and II.	$ 15,100,000	$ 5,180,000
Of the first 40,000,000 in costs for Section I, non-Federal interests are required to pay for reconstruction of the seawall at Sea Bright and Monmouth Beach, New Jersey. Thereafter, the non-Federal share is to be 35 percent of project costs in excess of 40,000,000, excluding non-creditable lands, easements and rights of way, and bear all costs of operation and maintenance and replacement of storm damage reduction facilities.	39,622,000	11,960,000
Pay 35 percent of the first costs of Section II, excluding non-creditable lands, easements and rights of way, and bear all costs of operation and maintenance and replacement of storm damage reduction facilities.	16,000,000	5,410,000
Pay 35 percent of the cost of periodic nourishment for Sections I & II.	512,378,000	
Reconstruct Seawall at Sea Bright and Monmouth Beach (Project requirement).	12,200,000	1,100,000
Total Non-Federal Costs	$595,300,000	$23,650,000

The non-Federal sponsor will also be required to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The Local Cooperation Agreement for Section I was signed on 30 July 1992. For Section II, the State of New Jersey Department of Environmental Protection, provided a letter dated 13 May 1994 stating their willingness to execute a Project Cooperation Agreement. The Project Cooperation Agreement is scheduled for execution in October 1995.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $1,104,900,000 is a decrease of $92,100,000 over the latest estimate ($1,197,000,000) presented to Congress (FY 1995). This change includes the following items:

Item	Amount
Design Changes	-$92,700,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A final Environmental Impact Statement (EIS) for Section I (Seabright to Ocean Township) was filed with the Environmental Protection Agency (EPA) in June 1990. A Record of Decision was signed on 26 November 1990. The EIS for Section II was filed with EPA in August 1993. A Record of Decision is being prepared.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1985. Project benefits, costs, and financial data reflect Section I and Section II only.

Contract 1a, for the Sea Bright to Monmouth Beach reach, was awarded in January 1994. Contract 1b is scheduled to be awarded in May 1995. Contract 2 is scheduled to be awarded in May 1996.

APPROPRIATION TITLE: Construction, General - Beach Erosion Control

PROJECT: East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY (Continuing)

LOCATION: The project is located on the south shore of Long Island between East Rockaway Inlet and Rockaway Inlet, approximately seven miles southeast of the Battery, New York City. The coastal area is a peninsula located entirely within the Borough of Queens, New York City. The project also includes the lands within and surrounding Jamaica Bay. The greater portion of Jamaica Bay lies in the Boroughs of Brooklyn and Queens, New York City, with a small section at the easterly end, known as Head of Bay in Nassau County, New York.

DESCRIPTION: The authorized project work consists of nourishing a 100 to 200 foot wide beach at an elevation of 10 feet above mean low water from Beach 149th Street to 19th Street.

AUTHORIZATION: Water Resources Development Act of 1974 and Water Resources Development Act of 1986 (Section 934).

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable because initial construction has been completed.

TOTAL BENEFIT-COST RATIO: Not applicable because initial construction has been completed.

INITIAL BENEFIT-COST RATIO: 1.5 to 1 at 5 1/2 percent (FY 1974).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation approved in June 1993 at December 1992 prices.

SUMMARIZED FINANCIAL DATA:				ACCUM PCT. OF EST FED COST	STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost			61,700,000				
Initial Construction		8,008,200				Nourishment	
Periodic Nourishment		53,691,800			Contract No. 6	0	Oct 1996
					Contract No. 7	0	being determined
					Contract No. 8	0	being determined
Estimated Non-Federal Cost			44,700,000		Entire Project	45	being determined
Initial Construction		24,592,200					
Cash Contributions	8,008,200						
Other Costs	16,584,000						

SUMMARIZED FINANCIAL DATA: (Continued)

				ACCUM PCT. OF EST FED COST
Periodic Nourishment		20,107,800		
Cash Contribution	20,107,800			
Other Cost	0			
Total Estimated Project Cost			106,400,000	
Initial Construction		32,600,400		
Periodic Nourishment		73,799,600		
Allocation to 30 September 1994			28,746,000	
Conference Allowance for FY 1995			7,600,000	
Allocation for FY 1995			6,397,000	1/
Allocation through FY 1995			35,143,000	57
Allocation Requested for FY 1996			6,100,000	67
Programmed Balance to Complete after FY 1996			20,472,000	
Unprogrammed Balance to Complete after FY 1996			0	

PHYSICAL DATA

Original Periodic nourishment of the beach between Beach 19th Street and Beach 149th Street, a distance of 4-1/2 miles, to maintain the berm to a width of 100-200 feet at elevation 10 feet above mean low water.

1/ Reflects $1,203,000 reduction for savings and slippage, and $5,800,000 in programmed carryover into FY 96.

JUSTIFICATION: The Rockaway peninsula is subject to frequent and severe damage from tidal inundation from the ocean and the bay. Along the oceanfront, a serious erosion problem has resulted from storms which reduce beach widths, expose waterfront development to wave attack and cause loss of recreational beach area. The project area is approximately 250 acres of urban shorefront, principally used for recreation purposes. Large sections of the high water beach periodically erodes. Unusually severe storms occurred in September 1921, September 1960, March 1962, and April 1967. The September 1960 storm caused maximum storm tide of record, flooded 3,500 acres of developed land, and resulted in losses exceeding $17,800,000. About 6,000 residences and hundreds of commercial buildings were severely damaged. Boats and waterfront terminal facilities were badly hit. Public utilities and transportation were seriously disrupted. The project area was included in declared disaster areas after the September 1960 and March 1962 storms. Appreciable damage resulted from the April 1967 storm, causing local agencies to place about 250,000 cubic yards of beach fill under emergency conditions at an estimated cost of $400,000. In October 1991 and December 1992, the area experienced flooding and beach erosion. A Presidential disaster was declared for the area following the December 1992 storm. The

JUSTIFICATION: (Continued)

reevaluation conducted under Section 934 of WRDA 1986 recommended continued Federal participation in three additional periodic nourishment cycles for the storm damage reduction features of the project. The Section 934 reevaluation report also recommended further analyses to determine whether modifications to the project are warranted to reduce the cost of futurs periodic nourishment. Based on the reevaluation conducted under Section 934 of WRDA of 1986, the average annual benefits are as follows:

Benefits	Amount
Storm Damage Reduction	$3,400,000
Recreation	6,370,000
Total	$9,770,000

FISCAL YEAR 1996: The Total program, amount including the requested and programmed carryover amounts of $6,100,000 and $5,800,000, respectively, will be applied as follows:

Continue contract No 6	$10,250,000
Planning, Engineering and Design	1,000,000
Construction Management	650,000
Total	$11,900,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financial concepts reflected in the Water Resources Development Act of 1986, the Non-Federal sponsor must comply with the Requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursement	Annual Operation, Maintenance and Replacement Costs
Pay 35 percent of the costs allocated to storm damage reduction, and 50 percent of the costs allocated to recreation, bear all costs of operation, maintenance, and replacement of storm reduction facilities.	8,008,200 1/ 20,107,800 2/	
Provide lands, easements and rights of way	16,584,000 1/	
Total Non-Federal Costs	$44,700,000	$0

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

1/ Initial construction and nourishment operations 1 through 5.
2/ Includes costs associated with continued nourishment operations 6

STATUS OF LOCAL COOPERATION: The local cooperating agency for this project is the New York State Department of Environmental Conservation. The project cooperation agreement (PCA) for this project, to extend the beach nourishment period is expected to be executed in April 1995.

The New York State Department of Environmental Conservation was the sponsor for the initial project in 1975 and for the first five nourishment operations through 1988.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $61,700,000 is the same as the latest estimate presented to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement was filed with the Council on Environmental Quality on 13 May 1974 for the initial project and nourishment. An Environmental Assessment for the extension of beach nourishment was filed with the United States Environmental Protection Agency in April 1994.

OTHER INFORMATION: Funds for initial construction were appropriated in FY 1974 Funds for the original 5 cycles of periodic nourishment were appropriated through FY 1988. Funds to initiate the continuation of periodic nourishment were appropriated in FY 1994. The periodic nourishment period has been extended in accordance with Section 934 of the Water Resources Development Act of 1986. The next nourishment cycle (No.6) will be initiated in FY 1995.

APPROPRIATION TITLE: Construction, General - Beach Erosion Control

PROJECT: Fire Island Inlet to Montauk Point, New York (Continuing)

LOCATION: The overall project area, extending from Fire Island Inlet easterly to Montauk Point along the Atlantic Coast of Suffolk County. The project is about 83 miles long and comprises about 70 percent of the total ocean frontage of Long Island. Fire Island Inlet is located about 50 miles by water east of the Battery, New York City.

DESCRIPTION: The project provides for beach erosion control and hurricane protection along five reaches of the Atlantic Coast of New York from Fire Island Inlet to Montauk Point by widening the beaches along the developed areas to a minimum width of 100 feet to an elevation of 14 feet above mean sea level and by raising dunes to an elevation of 20 feet above mean sea level from Fire Island Inlet to Hither Hills State Park and at Montauk and opposite Lake Montauk Harbor, supplemented by grass planting on the dunes, interior drainage structures, possible construction of 50 groins, and subsequent periodic beach nourishment. An interim project for the Westhampton Beach area is also included, which is to be constructed prior to completion of an ongoing overall project reformulation effort. This interim project provides for a beach berm extending westwardly from Groin 15 to Moriches Inlet at an elevation of 9.5 feet above mean sea level backed by a dune with a height of +13 feet a above msl. It also includes tapering of the existing westernmost two groins and construction of a new groin between groins 14 and 15.

AUTHORIZATION: River and Harbor Act 14 July 1960, modified by the Water Resources Development Act of 1974, the Water Resources Development Act of 1986, and the Water Resources Development Act of 1992.

REMAINING BENEFIT-REMAINING COST RATIO: 2.6 to 1 at 2 5/8 percent.

TOTAL BENEFIT-COST RATIO: 2.6 to 1 at 2 5/8 percent.

INITIAL BENEFIT-COST RATIO: 2.6 to 1 at 2 5/8 percent (FY 1963).

SUMMARIZED FINANCIAL DATA				ACCUM. PCT. OF EST. FED. COST
Estimated Federal Cost			$ 524,000,000	
Initial Construction		417,110,000		
Periodic Nourishment		106,890,000		
Estimated Non-Federal Cost			224,600,000	
Initial Construction		186,985,000		
Cash Contributions	171,475,000			
Other Costs	15,510,000			
Periodic Nourishment		37,615,000		
Cash Contributions	37,615,000			
Other Cost	0			
Total Estimated Project Cost			$ 748,600,000	
Initial Construction		604,095,000		
Periodic Nourishment		144,505,000		

Allocations to 30 September 1994	$ 19,001,400		
Conference Allowance for FY 1995	3,500,000		
Allocation for FY 1995	2,946,000	1/	
Allocations through FY 1995	21,947,400		4
Allocation Requested for 1996	10,400,000		6
Programmed Balance to Complete after FY 1996	491,652,600		
Unprogrammed Balance to Complete after FY 1996	0		

1/ Reflects $554,000 reduction for Savings and Slippage, and $180,000 in programmed carryover into FY 1996

STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Reach 2		
11 groins	100	Oct 1966
4 groins	100	Nov 1970
8 groins		
Westhampton Interim	0	Apr 1997
Balance of Reach	0	2/
Reach 4		
2 groins	100	Sep 1965
Dune/Beach Fill-18.4 mi	0	2/
Balance		
Dune/Beach Fill-39.7 mi	0	2/
Groins-27	0	2/

2/ Schedule is dependent on the outcome of the project reformulation effort.

PHYSICAL DATA

Dunes and beach replenishment: 73.5 miles.
Dunes: Raise to elevation 20 feet above MSL
Beaches: Widen to a minimum width of 100 feet
Interior drainage structures: 3 gated culverts
Groins: 52
Periodic Nourishment: 480,000 cubic yards/yr.

Division: North Atlantic District: New York Fire Island Inlet to Montauk Point, NY

JUSTIFICATION: Erosion has seriously reduced the width of the shoreline in the study area with consequent exposure of the shore and the mainland to wave attack and inundation damages. A recurrence of the hurricane tide of record (September 1938) when 45 lives were lost, would cause inundation and wave damage estimated at $652,000,000 (October 1992 price level). As a result of the 11 December 1992 storm, in the Westhampton Area (Section 1B of Reach 2), 60 residential structures were lost and two breaches of the barrier island occurred. Closure costs for the breaches was approximately $6,000,000.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $10,400,000 and $180,000, respectively, will be applied as follows:

Initiate Construction of Westhampton Interim project	$ 5,700,000
Planning, Engineering, and Design	
Westhampton Interim Project	100,000
Revaluation Report (LRR) for Reach 1	2,000,000
Reformulation Effort	2,180,000
Construction Management	600,000
Total	$10,580,000

NON-FEDERAL COSTS: Local interests are required to bear 30 percent of the total project cost including periodic nourishment, as well as the value of lands, easements, and rights-of-way.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance and Replacement Costs
Provide all lands, easements, and rights-of-way, and relocations.	$ 15,510,000	
Pay 30 percent of the first costs of the project excluding non-creditable lands, easements and rights of way, and bear all costs of operation and maintenance and replacement of storm damage reduction facilities.	141,510,000	
Pay 30 percent of the periodic nourishment cost	67,580,000	
Total Non-Federal Costs	$224,600,000	$ 0

NON-FEDERAL COSTS: (cont'd)

The non-Federal sponsor will also be required to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The agency responsible for local cooperation is the New York State Department of Environmental Conservation (NYSDEC). Assurances of local cooperation were executed by the NYSDEC on 14 August 1963 and accepted by the Federal Government on 20 August 1963. A project cooperation agreement for the Westhampton Interim project is scheduled or execution in July 1995.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $524,000,000 is the same as the latest estimate presented to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement (EIS) was filed with the Environmental Protection Agency (USEPA) on 28 January 1978. On 7 March 1978, the Department of the Interior (DOI), supported by other agencies referred the EIS to the Council on Environmental Quality (CEQ) as unacceptable. Subsequent to the strong objections on the project's final environmental impact statement, meetings were held between September 1978 and January 1980 with DOI, USEPA, U.S. Department of Commerce and NYSDEC. Two public scoping meetings were held in October 1979. Subsequently, the Federal agencies agreed to a basis for the reformulation of the Fire Island to Montauk Point project, including a general agreement on the studies necessary to answer the outstanding concerns. An environmental analysis was included in Supplement No. 2 to GDM No. 1 to determine environmentally acceptable measures of beach protection for the critically eroded areas at Westhampton Beach.

OTHER INFORMATION: Initial planning and construction funds were appropriated in FY 1963. The work remaining to be done is completion of construction of Reach 2-Moriches Inlet to Shinnecock Inlet and Reach 4 -Southampton to Beach Hampton, initiation of construction of Reach 1-Fire Island Inlet to Moriches Inlet, Reach 3 - Shinnecock to Southhampton and Reach 5-Beach Hampton to Montauk, as well as the completion of the reformulation effort. The Corps of Engineers concurred with the request by the State of New York to initially construct 11 groins (Reach 2), and 2 groins (Reach 4) with beach fill to be added as necessary but not sooner than 3 years after groin completion. In recognition of the critical condition of the beaches due to earlier storms, the Corps recommended to the State in June 1967 that the 3 year observation period be waived and that construction of urgent hurricane protection be resumed. The State concurred and requested that work be undertaken on additional groins, replacement of beach fill and dunes in Reach 2, as well as construction of groins, drainage structures and dune fill in Reach 4. Suffolk County, however, did not endorse the placement of beach and dune fills. Continuing negotiations during FY 1969 resulted in agreement on a plan for construction for certain groins, drainage structures, beach fill, and dunes to an interim height of 16 feet in Reaches 2 and 4. In December 1973, the State requested planning for Reach 2(Section 1b),(Westhampton Beach) and Reach 4 (Georgica Pond), indicating that it

OTHER INFORMATION (continued)

would provide funds. Planning resumed and assurances were requested from the State in October 1974. However, strong opposition developed with Suffolk County and the county legislature refusing to provide support. Subsequently erosion of the shoreline downdrift of the groin field at Westhampton Beach accelerated to the point were Dune Road, the only access to the homes in this area was under water during normal high tide. In December 1992, a breach occurred in the barrier island at Westhampton Beach which was subsequently closed. An interim plan for the severely eroded Westhampton Westhampton Beach area was prepared in June 1994, which provides for a lower level of protection than that provided in the original authorization. This interim plan has been designed such that it could be modified based on recommendation of the Reformulation effort. The USEPA and DOI agree in concept to the interim plan, provided that a full environmental assessment and/or environmental impact study is completed, and the reformulation of the overall project is reinstated.

APPROPRIATION TITLE: Construction, General - Beach Nourishment

PROJECT: Virginia Beach, Virginia (Reimbursement) (Continuing)

LOCATION: The city of Virginia Beach is located on the Atlantic Ocean south from Cape Henry and east of the city of Norfolk, Virginia.

DESCRIPTION: The project includes periodic nourishment of about 3 1/3 miles of beach between Rudee Inlet and 49th Street with maintenance of the berm to a minimum width of approximately 100 feet at elevation 7 feet above mean low water.

AUTHORIZATION: River and Harbor Act of 1962 and Water Resource Development Act of 1986.

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable because initial construction has been completed.

TOTAL BENEFIT-COST RATIO: Not applicable because initial construction has been completed.

INITIAL BENEFIT-COST RATIO: 4.7 to 1 at 3 1/8 percent (FY 1965).

BASIS OF BENEFIT-COST RATIO: Benefits and costs are from HD 382/87/2 adopted by the 1962 River and Harbor Act at January 1961 price levels.

SUMMARIZED FINANCIAL DATA:				ACCUM. PCT. OF EST. FED COST
Estimated Federal Cost			8,561,000	
Initial Construction		1,000,000		
Periodic Nourishment		7,561,000		
Estimated Non-Federal Cost			6,901,000	
Initial Construction		1,000,000		
Cash Contributions	1,000,000			
Other Costs	0			
Periodic Nourishment		5,901,000		
Cash Contributions	5,901,000			
Other Costs	0			

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Entire Project	72	Feb 1997

PHYSICAL DATA

Periodic nourishment of the beach between Rudee Inlet and 49th Street, a distance of about 3-1/3 miles, to maintain the berm to a minimum width of approximately 100 feet at elevation 7 ft above mean low water.

SUMMARIZED FINANCIAL DATA: (Cont)

			ACCUM PCT. OF EST. FED COST
Total Estimated Project Cost		15,462,000	
Initial Construction	2,000,000		
Periodic Nourishment	13,462,000		
Allocation to 30 September 1994		5,693,000	
Conference Allowance for FY 1995		900,000	
Allocation for FY 1995		558,000 1/	
Allocations through FY 1995		6,251,000	73
Allocation Requested for FY 1996		925,000	84
Programmed Balance to Complete after FY 1996		1,385,000	
Unprogrammed Balance to Complete after FY 1996		0	

1/ Reflects $142,000 reduction for savings and slippage and $200,000 reprogrammed from the project.

JUSTIFICATION: The periodic nourishment program is a modification of the original project adopted by the 1954 River and Harbor Act, which provided for beach restoration and the deferred construction of a system of groins. Comparative cost studies of groin construction versus periodic nourishment indicate that the latter is the more suitable and economical method for maintaining shore stability, protecting property, and insuring maximum recreation benefits from use of the publicly-owned shores. The beach was restored in 1953 and has been maintained since then by local interests, with Federal participation in the original cycle beginning in 1962 and ending in 1987. Its effectiveness in providing protection from hurricanes and northeast storms was demonstrated in the severe coastal storm of March 1962, when considerable property damages and business losses were averted. Commercial development along the beachfront has enjoyed an unprecedented boom during the past decade due in part to the protection provided by the beach restoration and nourishment program. Current valuation of oceanfront properties substantially exceeds that prevailing prior to project implementation. The average annual benefits, based on October 1991 price levels are as follows:

Benefits	Amount
Reduction in Storm Damage	$5,093,000
Recreation	3,249,000
Total	$8,342,000

FISCAL YEAR 1996: The requested amount of $925,000 will be used to reimburse local interests for the Federal share of the cost of the periodic nourishment program.

NON-FEDERAL COSTS: Local interests are required to furnish all necessary lands, easements, and rights-of-way; maintain the protective and improvement measures during their useful life, as may be required to serve their intended purpose; not permit water pollution that would endanger the health of bathers, and maintain continued public ownership of the shore upon which the amount of Federal participation is based, and its administration for public use only; and contribute 35 percent of the 10-year program of periodic nourishment cost. The total estimated cost of the local cooperation requirements is $6,901,000.

STATUS OF LOCAL COOPERATION: The non-Federal sponsor is the City of Virginia Beach. The original Project Cooperation Agreement (PCA) expired 6 February 1987. Consistent with Section 934 of the Water Resources Development Act of 1986, a new PCA was required. Ten additional years of Federal participation in periodic nourishment cost sharing were approved on 10 March 1988 by the Assistant Secretary of the Army for Civil Works. A PCA for the extension of periodic nourishment was executed on 9 August 1993. Article VII of the 9 August 1993 PCA states "The Government shall not be obligated to budget for appropriations to reimburse the Local Sponsor for, and costs incurred by the Local Sponsor for periodic nourishment after February 6, 1987, and before execution of this agreement. The Government shall reimburse the Local Sponsor for such costs only when specifically directed by Congress in legislation and when appropriations are made available for such purpose."

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $8,561,000 is the same as the latest estimate ($8,561,000) presented to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT AND COMPLIANCE WITH CLEAN WATER ACT: The final Environmental Impact Statement was published in the 1 August 1975 issue of the Federal Register. A Supplemental Information Report appeared in the 25 February 1980 issue of the Federal Register. A Record of Decision (ROD) was signed on 3 November 1993.

OTHER INFORMATION: Funds to initiate the original cycle of periodic nourishment were appropriated in FY 1965. Funds to initiate the reimbursement of the second cycle of periodic nourishment were appropriated in FY 1993.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Lackawanna River, Olyphant, Pennsylvania (Continuing)

LOCATION: Olyphant, Pennsylvania, is located along the Lackawanna River in the northeastern portion of the Commonwealth of Pennsylvania, in Lackawanna County.

DESCRIPTION: The proposed flood control system will provide a 100-year level of protection for the Borough. The project consists of levees, floodwalls, a closure structure, interior drainage facilities, slope protection, and associated cultural mitigation and environmental restoration. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1992.

REMAINING BENEFIT - REMAINING COST RATIO: 1.3 to 1 at 8-1/4 percent.

TOTAL BENEFIT - COST RATIO: 1.2 to 1 at 8-1/4 percent.

INITIAL BENEFIT - COST RATIO: 1.3 to 1 at 8-1/4 percent (FY 1995).

BASIS OF BENEFIT - COST RATIO: Benefits are from the Addendum to the Final Feasibility Report approved in June 1992 at October 1991 price levels.

SUMMARIZED FINANCIAL DATA			ACCUM. PCT. OF EST. FED COST	STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$10,900,000				
Estimated Non-Federal Cost:		4,500,000		Entire Project	0	being determined
Cash Contributions	$ 820,000					
Other Costs	3,680,000					
Total Estimated Project Cost		$15,400,000				

Allocations to 30 September 1994	792,000	
Conference Allowance for FY 1995	1,100,000	
Allocation for FY 1995	1,100,000 1/	
Allocations through FY 1995	1,892,000	17
Allocation Requested for FY 1996	240,000	19
Programmed Balance to Complete after FY 1996	8,768,000	
Unprogrammed Balance to Complete after FY 1996	0	

PHYSICAL DATA

Earth levees	- 3,800 feet
Concrete floodwall	- 1,400 feet
Drainage control structures	- 7
Gabion slope protection	- 1,500 feet

1/ Reflects $400,000 in programmed carryover into FY 1996.

JUSTIFICATION: Major floods occurred in the Lackawanna River Basin in 1942, 1955, and most recently in 1985 due to Hurricane Gloria. While the damage from these floods was widespread in the Lackawanna Basin, including many small communities and rural developments, the largest and most concentrated damages occurred in urbanized areas, including the City of Scranton and the Borough of Olyphant. A recurrence today of the Hurricane Gloria flood would result in $14.8 million in damages at Olyphant (October 1994 price level). The Olyphant community comprises a part of the Scranton Metropolitan Area and is important in the commerce and culture of the region. The 1985 flood caused serious property damage to homes and businesses, and untold trauma and hardship to local residents. The community has since recovered to its pre-flood vitality. Flood protection is desired to maintain homes and businesses free from flood damage and promote community improvement. The recommended plan is the National Economic Development Plan which maximizes net economic benefits. It will prevent about 84 percent of the existing $1.44 million in average annual commercial, industrial and residential flood damages estimated to occur in the protected area. The estimated average annual benefits, all flood control, are $1,274,000 based on the Addendum to the Final Feasibility Report approved in June 1992 at October 1991 price levels.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $240,000 and $400,000, respectively, will be applied as follows:

Planning, Engineering and Design	640,000
Total	$640,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Provide lands, easements and rights of way.	$2,480,000	
Modify or relocate, utilities, roads, bridges (except railroad bridges) and other facilities where necessary in the construction of the project.	1,200,000	
Pay 5 percent of the cost allocated to flood control and bear all costs of operation, maintenance and replacement of flood control facilities.	820,000	49,000
Total Non-Federal Costs	$4,500,000	49,000

STATUS OF LOCAL COOPERATION: The local sponsor for the Olyphant local flood control project is the Borough of Olyphant. By letter of 1 December 1991 the Borough indicated its willingness to furnish the required local cooperation and certified its authority, legal capability and financial ability to participate in project cost sharing in accordance with the Water Resources Development Act of 1986. The Commonwealth of Pennsylvania has assured the Borough it is prepared to contribute 50% of the non-Federal share. The sponsor intends to issue general obligation bonds to cover their expected cash requirement. A draft Project Cooperation Agreement has been coordinated between the Corps and the Borough identifying cost-sharing and local cooperation requirements. The Project Cooperation Agreement is scheduled for execution in May 1997.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $10,900,000 is an increase of $1,000,000 from the latest estimate ($9,900,000) submitted to Congress (FY 1994). The increase is based on the following items:

Item	Amount
Price Escalation on Construction Features	$ 290,000
Other Estimating Adjustments	710,000
Total	$1,100,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS was filed with EPA in April 1992. An Environmental Assessment including Finding of No Significant Impact was included in the final Design Memorandum approved in July 1994.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1992 and funds to initiate construction were appropriated in FY 1995.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Lackawanna River, Scranton, Pennsylvania (Continuing)

LOCATION: Scranton, Pennsylvania, is located along the Lackawanna River in the northeastern portion of the Commonwealth of Pennsylvania, in Lackawanna County.

DESCRIPTION: The proposed flood control system will provide a 100-year level of protection for a right bank section of the City known as Park Place. The project consists of levees and floodwalls, and appurtenant project features including improved flood warning system, removal of a railroad bridge, four closure structures, interior drainage facilities, access ramps, slope protection, and associated cultural mitigation. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1992.

REMAINING BENEFIT - REMAINING COST RATIO: 1.4 to 1 at 8-1/4 percent.

TOTAL BENEFIT - COST RATIO: 1.3 to 1 at 8-1/4 percent.

INITIAL BENEFIT - COST RATIO: 1.4 to 1 at 8-1/4 percent (FY 1995).

BASIS OF BENEFIT-COST RATIO: Benefits are from the Addendum to the Final Feasibility Report approved in June 1992 at October 1991 price levels.

SUMMARIZED FINANCIAL DATA			ACCUM. PCT. OF EST. FED COST	STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$15,400,000		Entire Project	0	being determined
Estimated Non-Federal Cost:		5,100,000				
Cash Contributions	$2,345,000					
Other Costs	2,755,000					
Total Estimated Project Cost		$20,500,000				

Allocations to 30 September 1994	1,048,000	
Conference Allowance for FY 1995	1,000,000	
Allocation for FY 1995	1,000,000 1/	
Allocations through FY 1995	2,048,000	13
Allocation Requested for FY 1996	357,000	16
Programmed Balance to Complete after FY 1996	12,995,000	
Unprogrammed Balance to Complete after FY 1996	0	

PHYSICAL DATA

Earth levees	- 5,800 feet
Concrete floodwall	- 1,700 feet
Drainage control structures	- 17
Gabion slope protection	- 2,700 feet

1/ Reflects $255,000 in programmed carryover into FY 1996.

JUSTIFICATION: Major floods occurred in the Lackawanna River Basin in 1942, 1955, and most recently in 1985 due to Hurricane Gloria. While the damage from these floods was widespread in the Lackawanna River Basin, including many small communities and rural developments, the largest and most concentrated damages occurred in urbanized areas such as the City of Scranton. Over 300 residential, and approximately 50 commercial and industrial properties are subject to flood damage in the Park Place area proposed for protection. A Gloria flood recurrence today would result in $14.4 million in damages in the Park Place area (October 1994 price level). The City of Scranton is the hub of commerce and culture for Northeastern Pennsylvania. The 1985 flood caused serious property damage to homes and businesses, and untold trauma and hardship to local residents. The community has since recovered to its pre-flood vitality. Flood protection is desired to maintain homes and businesses free from flood damage and promote community improvement. The recommended plan is the National Economic Development Plan which maximizes net economic benefits. It will prevent about 82 percent of the existing $2.3 million in average annual commercial, industrial and residential flood damage estimated to occur in the protected area. The estimated average annual benefits, all flood control, are $2,119,000 based on the Addendum to the Final Feasibility Report approved in June 1992 at October 1991 price levele.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $357,000 and $255,000, respectively, will be applied as follows:

Planning, Engineering and Design	612,000
Total	$612,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Provide lands, easements and rights of way.	$1,745,000	
Modify or relocate, utilities, roads, bridges (except railroad bridges) and other facilities where necessary in the construction of the project.	1,010,000	
Pay 5 percent of the cost allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation, maintenance and replacement of flood control facilities.	2,345,000	98,000
Total Non-Federal Costs	$5,100,000	98,000

STATUS OF LOCAL COOPERATION: The local sponsor for the Scranton local flood control project is the City of Scranton. By letter of 6 December 1991, the City indicated its willingness to furnish the required local cooperation and certified its authority, legal capability, and financial ability to participate in project cost sharing in accordance with the Water Resourcss Development Act of 1986. The Commonwealth of Pennsylvanis has assured the City that it is prepared to contribute 50% of the non-Federal share. The sponsor intends to issue general obligation bonds to cover their expected cash requirement. A draft Project Cooperation Agreement has been coordinated between the Corps of Engineers and the City identifying cost-sharing and local cooperation requirements. The Project Cooperation Agreement is scheduled for execution in February 1997.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $15,400,000 is an increase of $1,200,000 from the latest estimate ($14,200,000) submitted to Congress (FY 1994). The increase is based on the following items:

Item	Amount
Price Escalation on Construction Features	$ 300,000
Other Estimating Adjustments	900,000
Total	$1,200,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS was filed with EPA in March 1992. An Environmental Assessment including Finding of No Significant Impact was included in the final Design Memorandum scheduled for approval in August 1994.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1992 and funds to initiate construction were appropriated in FY 1995.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Molly Ann's Brook at Haledon, Prospect Park and Paterson, New Jersey (continuing)

LOCATION: The project area, which is approximately 12 miles northwest of New York City, is located in Haledon, Prospect Park and Paterson, New Jersey, along Molly Ann's Brook from the mouth below Totowa Avenue in Paterson upstream to Church Street in Haledon.

DESCRIPTION: The recommended plan is a modified channel with a total length of 2.5 miles. The channel will include both trapezoidal channel sections and walled sections. Five bridges will be replaced and one building will be removed. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1976 and Water Resources Development Act of 1986.

REMAINING BENEFIT-REMAINING COST RATIO: 1.49 to 1 at 8 percent.

TOTAL BENEFIT-COST RATIO: 1.28 to 1 at 8 percent.

INITIAL BENEFIT-COST RATIO: 1.16 to 1 at 8 3/4 percent (FY 1993).

BASIS OF BENEFIT-COST RATIO: Benefits are from the Limited Reevaluation Report dated March 1993 at October 1992 price levels.

SUMMARIZED FINANCIAL DATA:

Estimated Federal Cost		$23,600,000
Estimated Non-Federal Cost		10,200,000
Cash Contributions	1,700,000	
Other Costs	8,500,000	
Total Estimated Project Cost		$33,800.000

STATUS: (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Channel	1	Being Determined
Bridges	0	Being Determined
Entire Project	1	Being Determined

PHYSICAL DATA :

Channel: Length of 2.5 miles combining trapezoidal channel sections and walled sections.

Bridges: Replacement of five bridges and removal of one building.

Division: North Atlantic District: Philadelphia Molly Ann's Brook, Haledon, Prospect Park and Paterson, NJ

SUMMARIZED FINANCIAL DATA: (Cont)

		ACCUM. PCT. OF EST. FED COST
Allocations to 30 September 1994	3,332,000	
Conference Allowance for FY 1995	3,400,000	
Allocation for FY 1995	2,262,000 1/	
Allocations through FY 1995	5,594,000 2/	24
Allocation Requested for FY 1996	3,750,000	60
Programmed Balance to Complete after FY 1996	14,256,000	
Unprogrammed Balance to Complete after FY 1996	0	

1/ Reflects $538,000 assigned as savings and slippage and $660,00 reprogrammed to other projects.
2/ Reflects $3,259,000 in progammed carryover into FY 1996.

JUSTIFICATION: Major flooding in recent years has adversely affected about 520 residential, commercial and industrial establishments in the 100-year floodplain. The storms of 1968 and 1977 caused estimated damages of $2,100,000 and $12,300,000 respectively, at 1991 price level. The average annual benefits are $3,578,400 (October 1994 Price Level) and at an average annual cost of $3,074,000 (94 PL)

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $3,750,000 and $3,259,000 respectively, will be applied as follows:

Continue Construction	$ 6,669,000
Engineering and Design	40,000
Construction Management	300,000
TOTAL	$ 7,009,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

	Payments during Construction and Reimbursement	Annual Operation, Maintenance, and Replacement Costs
Provide lands, easements, rights-of-way.	$ 2,522,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	5,978,000	
Pay 5 percent of the costs allocated to flood control and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	1,700,000	$ 50,000
Total Non-Federal Cost	$10,200,000	$ 50,000

STATUS OF LOCAL COOPERATION: The Project Cooperation Agreement (PCA) was executed on 16 December 1993. The State of New Jersey Department of Environmental Protection and Energy, the non-Federal sponsor, is providing their support through the Intermodal Surface Transportation and Efficiency Act of 1991 and funds appropriated in their FY 1994 State Capital Budget. They are currently in the process of designing bridges to be modified as part of the project and acquiring the necessary lands, easements, and rights-of-way for the construction of the project.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $23,600,000 is an decrease of $200,000 over the latest estimate ($23,800,000) submitted to Congress (FY 1995). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	- $ 200,000
Total	- $ 200,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Record of Decision was signed on 3 November 1988.

OTHER INFORMATION: Funds to initiate preconstruction engineering, and design were appropriated in FY 1989. Funds to initiate construction were first appropriated in FY 1993.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Wyoming Valley, Pennsylvania (Levee Raising) (Continuing)

LOCATION: Wyoming Valley is located in northeastern Pennsylvania and extends from Duryea on the Lackawanna River southwestward to Nanticoke on the Susquehanna River. The Wyoming Valley flood control projects are located on the Susquehanna River in Luzerne County and are the four contiguous existing Federal flood control projects at Plymouth, Kingston-Edwardsville, Swoyersville-Forty Fort, and Wilkes-Barre and Hanover Township, which together function as a flood control system within the Valley.

DESCRIPTION: The four existing Federal flood control projects in the Wyoming Valley were designed to protect against a flood equal to the March 1936 event which had a peak flow of 232,000 cubic feet per second. Modifications to the existing project would protect against flood flows of 318,500 cubic feet per second that would be caused by a recurrence of Storm Agnes. The proposed modifications include raising existing levees and floodwalls between 3 and 5 feet, modifying closure structures, relocating utilities, and providing some new floodwalls and levees to maintain the integrity of the flood control system. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1986.

REMAINING BENEFIT - REMAINING COST RATIO: 2.2 to 1 at 8-1/4 percent.

TOTAL BENEFIT - COST RATIO: 2.0 to 1 at 8-1/4 percent.

INITIAL BENEFIT - COST RATIO: 2.8 TO 1 at 8-1/4 percent (FY 1995).

BASIS OF BENEFIT - COST RATIO: Benefits are from the draft Phase II General Design Memorandum dated June 1993 at January 1993 price levels.

SUMMARIZED FINANCIAL DATA			ACCUM. PCT. OF EST. FED COST	STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$100,000,000				
Estimated Non-Federal Cost:		56,000,000		Entire Project	0	being determined
Cash Contributions	$23,420,000					
Other Costs	32,580,000					
Total Estimated Project Cost		$156,000,000				

Allocations to 30 September 1994	11,095,000	
Conference Allowance for FY 1995	2,000,000	
Allocation for FY 1995	1,683,000	1/
Allocations through FY 1995	12,778,000	13
Allocation Requested for FY 1996	4,300,000	17
Programmed Balance to Complete after FY 1996	82,922,000	
Unprogrammed Balance to Complete after FY 1996	0	

1/ Reflects reduction of $317,000 assigned for savings and slippage.

PHYSICAL DATA

Swoyersville-Forty Fort		Plymouth	
Completed Work	Raising Work	Completed Work	Raising Work
Levees - Earthfill: 16,970 ft. Floodwall - Steel sheetpile: 2,490 ft. Channel - 3,900 ft.	Levees - Earthfill: 16,500 ft. x 3-5 ft. Floodwall - Steel sheetpile: 4,000 ft. x 3-5 ft.	Levees - Earthfill: 8,700 ft. Channel - 2,670 ft. Pump Stations - 2	Levees - 8,600 ft. x 2-4 ft. Floodwall - Concrete: 200 ft. x 2-4 ft. Steel sheetpile: 200 ft. x 2-4 ft. Earth: 500 ft. x 2-4 ft.

Kingston-Edwardsville		Wilkes-Barre and Hanover Township	
Completed Work	Raising Work	Completed Work	Raising Work
Levees - Earthfill: 18,430 ft. Conduit - 16.5 ft. x 6,660 ft. Channel - 3,640 ft. Pump Stations - 3	Levees - Earthfill: 17,300 ft. x 3-5 ft. Floodwall - Concrete: 500 ft. x 3-5 ft. Earth: 500 ft. x 3-5 ft. Closures - 3 new Pump Station Modifications - 4	Levees - Earthfill: 27,860 ft. Floodwall - Concrete: 160 ft. Channel Stations - 8 Channel - 1,000 ft.	Levees - Earthfill: 20,600 ft. x 3-5 ft. Floodwall - Concrete: 500 ft. x 3-5 ft. Sheetpile 4,300 ft. x 3-5 ft. Earth: 600 ft. x 3-5 ft. Closures - 3 new & 1 modified Pump Station Modification - 13

JUSTIFICATION: The four existing local protection projects which comprise the Wyoming Valley system were constructed between 1935 and 1976 and provide protection for an area of 5,160 acres and a population of 225,000. Over the past 200 years at least 32 floods have been recorded which exceeded a stage of 25 feet at Wilkes-Barre compared to the flood stage of 22 feet. The discharge of 345,000 cubic feet per second during June 1972 (Storm Agnes) without the now completed Cowanesque and Tioga-Hammond Lakes projects in operation overtopped the protection and resulted in the greatest flood of record with damages of $730,000,000. A recurrence of Storm Agnes would result in damages of about $2 billion (October 1994 price level). The average annual benefits amount to $26,595,000 essentially all for flood control, based on the draft Phase II General Design Memorandum dated June 1993 at January 1993 price levels.

FISCAL YEAR 1996: The requested amount will be applied as follows:

Fish and Wildlife Mitigation	$ 16,000
Initiate construction of Swoyersville-Forty Fort levee	1,652,000
Initiate construction of Exeter levee	570,000
Cultural Resources Preservation	500,000
Planning, Engineering & Design	860,000
Construction Management	702,000
Total	$4,300,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Provide lands, easements and rights of way.	5,510,000	
Modify or relocate, utilities, roads, bridges (except railroad bridges) and other facilities where necessary in the construction of the project.	27,070,000	

NON-FEDERAL COSTS: CONT'D

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Operation, Maintenance, and Replacement Costs
Pay 16 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation, maintenance and replacement of flood control facilities.	22,130,000	141,000
Pay one-half of the separable costs allocated to recreation (except recreational navigational) and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	1,290,000	31,000
Total Non-Federal Costs	$56,000,000	$172,000

STATUS OF LOCAL COOPERATION: The non-Federal sponsor is Luzerne County. The Pennsylvania Department of Environmental Resources has committed to provide 50 percent of the non-Federal share of project costs. Letters of intent to provide the required local cooperation requirements were furnished by Luzerne County (14 January 1988) and the Commonwealth of Pennsylvania (29 January 1988). A Project Cooperation Agreement is scheduled for execution in November 1995.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $100,000,000 is a decrease of $78,000,000 from the latest estimate ($178,000,000) submitted to Congress (FY 1994). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	$-15,330,000
Post Contract Award and Other Estimating Adjustmente	-62,670,000
Total	$-78,000,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A Supplemental Environmental Impact Statement is included in the draft General Design Memorandum completed in June 1993.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1984 and funds to initiate construction were appropriated in FY 1995.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Ramapo River at Oakland, New Jersey (Continuing)

LOCATION: The project is located on the Ramapo River in the Borough of Oakland in Bergen County, and Wayne Township and the Borough Pompton Lakes in Passaic County, New Jersey. The project extends from the Pompton Lake Dam upstream to West Oakland Avenue in Oakland.

DESCRIPTION: The plan of improvement has two major features. The first involves the installation of flood control taintor gates on the existing Pompton Lake Dam. The second feature involves channel modification consisting of widening and deepening 5,800 feet of the Ramapo River. Mitigation for environmental impacts is also included in the form of wetland creation. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1986. Congressional reauthorization is required based on the General Design Memorandum approved July 1994.

REMAINING BENEFIT-REMAINING COST RATIO: 1.3 to 1 at 8 percent.

TOTAL BENEFIT-COST RATIO: 1.3 to 1 at 8 percent.

INITIAL BENEFIT-COST RATIO: Not applicable

BASIS OF BENEFIT-COST RATIO: Benefits and costs are from the General Design Memorandum approved July 1994 at October 1993 price levels.

SUMMARIZED FINANCIAL DATA			ACCUM. PCT. OF EST. FED COST	STATUS (1 JAN 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$9,025,000		Channels & Canals	0	being determined
Estimated Non-Federal Cost		2,975,000		Flood Diversion Structure	0	being determined
Cash Contributions	2,325,000					
Other Costs	650,000					
				Entire Project	0	being determined
Total Estimated Project Cost		$12,000,000				

PHYSICAL DATA

Allocations to 30 September 1994	1,415,000	
Conference Allowance for FY 1995	600,000	
Allocation for FY 1996	600,000	
Allocation through FY 1995	2,015,000	22
Allocation Requested for FY 1996	70,000	23
Programmed Balance to Complete after FY 1996	9,915,000	
Unprogrammed Balance to Complete after FY 1996	0	

Chanels & Canals: 5800 feet of channel modification along the Ramapo River

Flood Diversion Structure: Installation of taintor gates at the Pompton Lake Dam.

JUSTIFICATION: The project area suffers annual flood damages of $1,100,000 (Oct 94 price level) without the project. Damages of $200,000 would occur with the project in place. The level of protection is the 40-year flood. The project would also provide protection against larger flood events. The maximum flood of record was the April 1984 flood an approximate 40-year event, and resulted in residential damage of $3,500,000, in 1984. This flood would cause damages estimated at $5,100,000, if it occurred today. Approximately 300 families were evacuated during the 1994 flood and 20 people were trapped and had to be rescued. Flooding also caused traffic disruption causing many businesses to close. Damaging floods have occurred 11 times in the past 20 years with the most recent floods in 1983, 1984, 1987 and 1993. The project does not support the development of the floodplain directly or indirectly. The project does avoid, where possible, both long and short term environmental impacts. Mitigation includes the construction of 5.0 acres of wetlands in the project area. Average annual benefits, all flood control, are estimated at $1,024,700 at October 1993 price level.

FISCAL YEAR 1996: The requested amount will be applied as follows:

Planning, Engineering, and Design	70,000
Total	$ 70,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$ 650,000	
Pay 25 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, as determined under Section 103(m) of the Water Resources Development Act of 1986 to reflect the non-Federal sponsor's ability to pay, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	$2,325,000	$ 46,000
Total non-Federal Coss	$2,975,000	$ 46,000

STATUS OF LOCAL COOPERATION: The State of New Jersey, through its Department of Environmental Protection and Energy (NJDEPE), is the non-Federal sponsor. By letter dated 22 October 1993, NJDEPE indicated its commitment to the project. The entire non-Federal share of the project cost has been programmed into the New Jersey State Capital Budget for FY 1995. The funds will be held in escrow and expended as required By letter dated 4 Januany 1994, NJDEPE understands their responsibilities in carrying out the provisions of the PCA and is prepared to enter into such an agreement. The project is also supported by the Boroughs of Oakland, and Pompton Lakes, NJ. Oakland has purchased portions of the real estate necessary for the project. The PCA is scheduled to be executed in October 1996.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $9,025,000 is an increase of $1,345,000 over the latest estimate ($7,680,000) presented to Congress (FY 1992). The change includes the following items:

Item	Amount
Price Escalation on Construction Features	$ 460,000
Design Changes	885,000
Total	$1,345,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS was filed with EPA on 21 June 1985.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1988 and funds to initiate construction were approrpiated in FY 1995.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: North Ellenville, New York (Deficiency Correction) (Continuing)

LOCATION: The project is located in the Village of Ellenville in Ulster County in the southern portion of New York.

DESCRIPTION: The recommended plan for design deficiency correction involves repair, reinforcement, or replacement of undermined floodwalls; placement of riprap protection along the Beer Kill channel bottom and toes of the banks; repair and replacement of grout bags along section of levees; and removal of a rock outcrop to reduce erosive velocities. All work is programmed.

AUTHORIZATION: Flood Control Act of 1962 and the Water Resources Development Act of 1990.

REMAINING BENEFIT-REMAINING COST RATIO: 1.4 to 1 at 8 3/4 percent.

TOTAL BENEFIT-COST RATIO: 1.8 to 1 at 8 3/4 percent.

INITIAL BENEFIT-COST RATIO: 1.8 TO 1 at 8 3/4 percent (FY 1989).

BASIS OF BENEFIT-COST RATIO: Annual benefits and costs are based on the February 1989 Deficiency Reconnaissance Report, Rondout Creek Basin, New York, North Ellenville Completed Flood Control Project, approved in August 1990, at 1988 price levels.

SUMMARIZED FINANCIAL DATA:			ACCUM. PCT. OF EST. FED COST
Original Project			
Actual Federal Cost		$ 3,700,000	
Actual Non-Federal Cost		830,000	
Cash Contributions	0		
Other Costs	830,000		
Total Original Project Cost		$ 4,530,000	

STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Channels & Canals	0	Nov 1996
Levees & Floodwalls	0	Nov 1996
Entire Project	0	Nov 1996

Remedial Work			ACCUM PCT. OF EST. FED COST
Estimated Federal Cost		6,100,000	
Estimated Non-Federal Cost		45,000	
Cash Contribution	0		
Other Costs	45,000		
Total Estimated Remedial Work Cost		6,145,000	
Total Estimated Project Cost		10,675,000	
Allocation to 30 September 1994		1,580,000	
Conference Allowance for FY 1995		600,000	
Allocation for FY 1995		505,000	1/
Allocation through FY 1995		2,085,000	34
Allocation Requested for FY 1996		4,015,000	100
Programmed Balance to Complete after FY 1995		0	
Unprogrammed Balance to Complete after FY 1995		0	

1/ Reflects $95,000 reduction assigned savings and slippage.

PHYSICAL DATA

Channels and Canals: 6,300 of riprap protection along the Beer Kill channel; 700 feet of grout along section of levees. Flood walls: removal of 3 monoliths and 4 I-walls; construction of 3 monoliths of 90 feet total length, 18 feet High and 1.25 feet thick; construction of I-wall 10 feet long, 10 feet high and 1.67 feet thick.

JUSTIFICATION: The project was completed in 1974 and protects 82 acres of residential and commercial property, with a population of about 4,400. The value of the land and improvements protected is approximately $51,860,000 (October 1993 price levels). Within the protected area, there are approximately 180 residences, 10 commercial establishments, five industrial concerns, utilities, and a high school. A recurrence of the maximum flood of record (August 1955) would cause damages of about $4,940,000 (October 1993 price levels). Average annual benefits are estimated at $686,500 (December 1991 price levels), all assigned to flood damage reduction.

As a result of a severe storm in 1980, several areas of bank protection eroded. Repairs performed under Public Law 84-99 authority were completed in 1981. Another storm caused extensive damage to the project in 1987. Repairs to highly critical areas were performed in October 1987 under Public Law 84-99 authority. The remaining areas were evaluated in a Design Deficiency Reconnaissance Report. Remedial work is essential at this time to correct deficiencies

JUSTIFICATION: (cont'd)

identified in the report and enable the project to operate as originally intended. Failure to correct these deficiencies will pose a continued safety hazard, threat to life, and economic loss.

FISCAL YEAR 1996: The requested amount of $4,015,000 will be applied as follows:

Complete Construction Contract	$3,495,000
Planning, Engineering and Design	170,000
Construction Management	350,000
Total	$4,015,000

NON-FEDERAL COST: In accordance with Section 414 of the Water Resources Development Act of 1990, the non-Federal sponsor must comply with the requirements listed below:

	Payments During Construction and Reimbursements	Annual Operation Maintenance Repair Rehabilitation and Replacement Costs
Provide lands, easements and rights-of-way.	$45,000	
Pay all costs of operation, maintenance, repair, and replacement of flood control facilities.		$11,000
Total Non-Federal Costs	$45,000	$11,000

STATUS OF LOCAL COOPERATION: New York State Department of Environmental Conservation, the non-Federal sponsor, has been actively involved in the development of this project. In a letter dated 9 November 1990, the sponsor indicated its willingness to participate in the remedial work under the terms of Section 414 of the Water Resources Development Act of 1990. A Local Cooperation Agreement for the remedial work is scheduled to be executed in April 1995.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $6,100,000 is the same as the latest estimate presented to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: It has been determined that an Environmental Impact Statement or Environmental Assessment is not required.

OTHER INFORMATION: The original project was completed in FY 1974. Funds to initiate remedial work on the project were appropriated in FY 1989. In September 1987, a Public Law 84-99 Letter Report was prepared in response to damages to the project resulting from a storm in April 1987. In October 1987, a construction contract was awarded to undertake repairs necessary to maintain the integrity of the project. Those repairs were completed in June 1988. Subsequently, in June 1989, the District prepared a Design Deficiency Reconnaissance Report for the repair of the sections of the project not addressed in the Public Law 84-99 Report. The scheduled completion date of November 1996 for the project is a slippage from the latest completion date of June 1995 presented to Congress. This change is due to a delay in completing the design work.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: James R. Olin Flood Control Project, Virginia (Continuing)

LOCATION: The project is located in the City of Buena Vista, Virginia, along the east bank of the Maury River, in Rockbridge County.

DESCRIPTION: The project will provide a system of floodwalls and levees on the left bank and channel modifications to provide flood protection against a flood equal to the August 1969 event which is the maximum flood of recent record. The programmed portion of the project (lower element) consists of a combination levee/floodwall with controlled channelized flow of interior drainage and channel refinement to the Maury River. The unprogrammed portion of the project (upper element) consists of a concrete ringwall around the Georgia Bonded Fibers plant.

AUTHORIZATION: Water Resources Development Act of 1990.

REMAINING BENEFIT-REMAINING COST RATIO: 1.5 to 1 at 8 3/4 percent.

TOTAL BENEFIT-COST RATIO: 1.2 to 1 at 8 3/4 percent.

INITIAL BENEFIT-COST RATIO: 1.2 to 1 at 8 3/4 percent (FY 1993).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation presented in the Design Memorandum dated May 1993 and approved in August 1993 at October 1992 price levels.

SUMMARIZED FINANCIAL DATA				ACCUM. PCT. OF EST. FED COST	STATUS (1 Jan 1995)	PHYSICAL PERCENT COMPLETE	COMPLETION SCHEDULE
Estimated Federal Cost			38,500,000		Lower Element	5	Sep 1997
Programmed Construction		31,350,000			Upper Element	0	Indefinite
Unprogrammed Construction		7,150,000			Entire Project	3	Indefinite
Estimated Non-Federal Cost			12,830,000				
Programmed Construction		10,450,000					
Cash Contributions	4,890,000						
Other Costs	5,560,000						

SUMMARIZED FINANCIAL DATA: (cont'd)

Estimated Non-Federal Cost				
Unprogrammed Construction		2,380,000		
Cash Contributions	2,130,000			
Other Cost	250,000			
Total Estimated Programmed Construction Cost			41,800,000	
Total Estimated Unprogrammed Construction Cost			9,530,000	
Total Estimated Project Cost			51,330,000	
Allocations to 30 September 1994			7,800,000	
Conference Allowance for FY 1995			4,700,000	
Allocation for FY 1995			2,956,000	1/
Allocations through FY 1995			10,756,000	28
Allocation Requested for FY 1996			7,400,000	47
Programmed Balance to Complete after FY 1996			13,194,000	
Unprogrammed Balance to Complete after FY 1996			7,150,000	

PHYSICAL DATA

Lower Element:
Earth levees, 11,000 feet long; concrete T-Wall, 800 feet long; associated interior drainage including a canal consisting of 2 segments, 18 feet wide by 1,800 feet long and 27 feet wide by 4,000 feet long; channel refinements, 200 foot bottom for 3,700 feet; 3 railroad and street closures; and street and railroad modifications including construction of a highway bridge, 38 feet wide by 70 feet long Average heights are 16 feet and 19 feet for the levees and floodwall, respectively.

Upper Element (Unprogrammed):
Concrete ringwall, 2,270 feet long; associated interior drainage; 3 railroad and street closures; and street and railroad modifications. The ringwall would range from 37 to 50 feet in height.

1/ Reflects $744,000 reduction assigned as savings and slippage and $1,000,000 reprogrammed from the project.

JUSTIFICATION: The Maury River drains an area of about 840 square miles in Virginia and empties into the James River The Buena Vista flood plain (340 year flood frequency) encompasses about 570 acres of mostly urban development on the left bank of the Maury River. Flooding problems are severe at Buena Vista with major storms occurring in 1936, 1969, and 1985. A recurrence of the August 1969 storm, the maximum flood of record, would cause damages of approximately $61.0 million to Buena Vista based on 1992 prices. Average annual benefits for the programmed portion of the project amount to $4,601,000, all for flood control, based upon the May 1993 design memorandum at October 1992 prices

FISCAL YEAR 1996: The requested amount of $7,400,000 will be applied as follows:

Continue Construction	$6,350,000
Planning, Engineering, and Design	475,000
Construction Management	575,000
Total	$7,400,000

NON-FEDERAL COST: In accordance with the cost-sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Lower Element:		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	2,450,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), railroads, and other facilities, where necessary for the construction of the project.	3,110,000	
Pay 11.7 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	4,890,000	120,000
Sub-Total Non-Federal Costs, Lower Element	$10,450,000	$120,000

NON-FEDERAL COST (Continued)

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Upper Element (Unprogrammed):		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	130,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), railroads, and other facilities, where necessary for the construction of the project.	120,000	
Pay 23.2 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	2,130,000	25,000
Sub-Total Non-Federal Costs, Upper Element	2,380,000	25,000
Total Non-Federal Costs, Total Project	$12,830,000	$145,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The City of Buena Vista, Virginia is the non-Federal project sponsor. The Project Cooperation Agreement for the programmed portion of the project was executed on 17 February 1994 The non-Federal sponsor is providing its share of project costs through issuance of general obligation bonds, establishment of a flood protection fund, and by receipt of appropriations from the Commonwealth of Virginia for half of the required non-Federal share. Future annual operation, maintenance, repair, rehabilitation and replacement costs will be funded through an existing food and lodging tax.

The current non-Federal cost estimate for programmed work of $10,450,000, which includes a cash contribution of $4,890,000, is the same estimate noted in the Project Cooperation Agreement.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $38,500,000 is the same as the latest estimate presented to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Impact Assessment/Finding of No Significant Impact (EIA/FONSI) was issued in March 1990 and a supplement was issued in May 1992.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1990 and funds to initiate construction were appropriated in FY 1993.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Moorefield, West Virginia (Continuing)

LOCATION: The Town of Moorefield is located in northeastern West Virginia at the confluence of the South Branch Potomac River and the South Fork of the South Branch Potomac River in Hardy County.

DESCRIPTION: The project includes a flood warning system, approximately 21,600 feet of earth levee, 1,360 linear feet of floodwall, highway bridge replacement and replacement of one span of the railroad bridge, environmental mitigation and appurtenant project features such as ramps, closures, riprap, relocations, and ponding areas for local drainage. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1990.

REMAINING BENEFIT-REMAINING COST RATIO: 1.5 to 1 at 8 1/2 percent

TOTAL BENEFIT-COST RATIO: 1.11 to 1 at 8 1/2 percent.

INITIAL BENEFIT-COST RATIO: 1.11 to 1 at 8 1/2 percent (FY 1994)

BASIS OF BENEFIT-COST RATIO: Benefits are from the Limited Reevaluation Report dated June 1992 at May 1992 price levels.

SUMMARIZED FINANCIAL DATA:			ACCUM PCT. OF EST. FED COST	STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$16,800,000				
Estimated Non-Federal Cost:		4,900,000		Entire Project	0	Sep 1997
Cash Contributions	0					
Other Costs	4,900,000					
Total Estimated Project Cost		$21,700,000				

Division: North Atlantic District: Baltimore Moorefield, WV

SUMMARIZED FINANCIAL DATA: (CONT'D)

Allocations to 30 September 1994	2,748,000		
Conference Allowance for FY 1995	3,800,000		
Allocation for FY 1995	3,199,000	1/	
Allocations through FY 1995	5,947,000		35
Allocation Requested for FY 1996	4,200,000		60
Programmed Balance to Complete after FY 1996	6,653,000		
Unprogrammed Balance to Complete after FY 1996	0		

PHYSICAL DATA

Earth levees	- 21,600 feet
Concrete floodwall	- 1,360 feet
Closure structures	- 2
Raising of U.S. Route 220 highway bridge	- 220-foot span
Railroad bridge	- Replace 80-foot span

1/ Reflects reduction of $601,000 assigned for savings and slippage and $900,000 in programmed carryover into FY 96.

JUSTIFICATION: The Town of Moorefield lies at the confluence of the South Fork and South Branch Potomac River. Minor flooding begins to occur at about the once in 20-year event. The town has experienced major floods on several occasions (March 1936, June 1949, and November 1985). Typically, major floods in the area have very high velocities and rise and fall rapidly, with short warning times due to the steep terrain in the upstream watershed. The largest recorded flood occurred in November 1985, causing three deaths and damages of about $29,100,000. Three feet of water covered the business district, the industrial zone, and the schools in North Moorefield; and up to seven feet of water affected all structures (mainly residential) in South Moorefield. As a result, approximately 135 structures were condemned. Damages occurred to homes, businesses, schools, industries, roads, railroads, bridges, and utilities. If a similar flood were to occur today, damages are estimated at $78,250,000 (October 1994 price level). The estimated average annual benefits for the proposed project, all flood control, are estimated at $2,016,000 (May 1992 price level).

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $4,200,000 and $900,000, respectively, will be applied as follows:

Relocations	$ 170,000
Fish & Wildlife Mitigation	175,000
Cultural Resources	180,000
Continue levee construction	3,870,000
Planning, Engineering, and Design	415,000
Construction Management	290,000
Total	$5,100,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the Energy and Water Development Appropriations Act of 1993, and the Interior Appropriations Act of 1993, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance and Replacement Costs
Provide lands, easements and rights-of-way.	$1,260,000	
Modify or relocate, utilities, roads, bridges (except railroad bridges) and other facilities where necessary in the construction of the project.	3,640,000	
Pay 5 percent of the cost allocated to flood control and bear all costs of operation, maintenance and replacement of flood control facilities (the cash contribution ie deemed satisfied in consideration of the transfer of Grandview State Park to the Federal Government).	0	84,000
Total Non-Federal Costs	$4,900,000	84,000

STATUS OF LOCAL COOPERATION: The local assurer for the flood protection project is the Town of Moorefield. The Town has stated their intent to be the non-Federal sponsor and is willing and able to participate in project cost sharing in accordance with the Water Resources Development Act of 1986. The Town has provided their written commitment to enter into a Project Cooperation Agreement (PCA) by letter dated 21 November 1989. Both Hardy County and the State of West Virginia have also indicated their strong support for the project. The PCA was signed in May 1994.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $16,800,000 is the same as the latest estimate submitted to Congress (FY 1995).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS was filed with EPA in June 1990. An environmental assessment including Finding of No Significant Impact was included in the Design Memorandum completed in September 1993.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1990 and funds to initiate construction were appropriated in FY 1994.

In accordance with the Energy and Water Development Appropriation Act of 1993, the cash contribution required under Section 103(a)(1)(A) of the Water Resources Development Act of 1986 for the Moorefield and Petersburg, West Virginia, projects is deemed satisfied in consideration of the transfer of Grandview State Park to the Federal Government. In accordance with the Interior Appropriations Act of 1993, any balance of the park's appraised value will be applied to the local requirement for lands, easements, and rights-of-way on these two projects required by Section 103(a)(1)(B) of the 1986 Act. The value of the park has been appraised by the National Park Service and does not exceed the value of the cash contribution that would otherwise be required by Section 103(a)(1)(A) of the Water Resources Development Act of 1986 for the two projects. Consequently, the local sponsor's share of project costs has been modified to reduce the cash contribution to zero.

APPROPRIATION TITLE: Construction, General - Local Protection (Flood Control)

PROJECT: Petersburg, West Virginia (Continuing)

LOCATION: The City of Petersburg is located along the South Branch of the Potomac River in eastern Grant County, West Virginia.

DESCRIPTION: The project consists of earth levee, floodwall, channel improvements, Route 220 bridge modifications, environmental mitigation, and appurtenant project features such as ramps, a closure, slope protection, relocations, ponding areas for interior drainage, and flood warning system improvements. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1990.

REMAINING BENEFIT-REMAINING COST RATIO: 1.8 to 1 at 8 3/4 percent.

TOTAL BENEFIT-COST RATIO: 1.3 to 1 at 8 3/4 percent.

INITIAL BENEFIT-COST RATIO: 1.4 to 1 at 8 3/4 percent (FY 1993).

BASIS OF BENEFIT-COST RATIO: Benefits are from the Limited Reevaluation Report dated December 1992 at July 1992 price levels.

SUMMARIZED FINANCIAL DATA:			ACCUM. PCT. OF EST. FED COST	STATUS (1 Jan 1995)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$17,700,000				
Estimated Non-Federal Cost:		6,500,000		Entire Project	0	Aug 1997
Cash Contributions	$ 0					
Other Costs	6,500,000					
Total Estimated Project Cost		$24,200,000				

Division: North Atlantic District: Baltimore Petersburg, WV

SUMMARIZED FINANCIAL DATA: (CONT'D)

Allocations to 30 September 1994	2,704,000	
Conference Allowance for FY 1995	4,200,000	
Allocation for FY 1995	3,535,000 1/	
Allocations through FY 1995	6,539,000	37
Allocation Requested for FY 1996	7,900,000	82
Programmed Balance to Complete after FY 1996	3,561,000	
Unprogrammed Balance to Complete after FY 1996	0	

PHYSICAL DATA

Earth levees	- 18,460 feet
Concrete floodwall	- 900 feet
Channel excavation	- 61,000 cubic yards
Raising of U.S. Route 220 highway bridge	- 410-foot span

1/ Reflects reduction of $665,000 assigned for savings and slippage and $1,200,000 in programmed carryover into FY 96

JUSTIFICATION: The City of Petersburg has experienced extensive flood damages on several occasions in past years. Typically, floods in the area have very high velocities and rise and fall rapidly with short warning times due to the steep terrain in the upstream watershed. Significant floods occurred in March 1936, June 1949 and November 1985. The flood in March 1936 resulted in the inundation of South Petersburg and portions of Petersburg south of the Mill Race and along the right bank of Lunice Creek. During the 1936 flood, part of the bulwarks failed causing damage within Petersburg. Estimated damages for a recurrence of this flood in the South Branch area would be about $22,000,000 with the current level of development. Prior to November 1985, the most damaging flood in the Petersburg area occurred in June 1949. This flood resulted in the inundation of portions of Petersburg and all of South Petersburg with water depths of five feet. Estimated damages with a recurrence of this flood would be $27,400,000 (October 1994 price level). The city was devastated by flooding in November 1985 which represented the flood of record for the South Branch Potomac River at Petersburg. The flood caused damages estimated at $28,200,000 and demolished approximately 20 homes in the Petersburg area. Average flood depths of about seven feet inundated all buildings south of the river and affected about 30 percent of the buildings north of the river. The estimated average annual benefits for the project, all flood control, are $2,909,000 (July 1992 price level).

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $7,900,000 and $1,200,000, respectively, will be applied as follows:

Continue Relocations	170,000
Fish & Wildlife Mitigation	475,000
Continue Levee Construction	7,755,000
Planning, Engineering, and Design	100,000
Construction Management	600,000
Total	$9,100,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the Energy and Water Development Appropriations Act of 1993, and the Interior Appropriations Act of 1993, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Provide lands, easements and rights-of-way.	$ 0	
Modify or relocate, utilities, roads, bridges (except railroad bridges) and other facilities where necessary in the construction of the project.	6,500,000	
Pay 5 percent of the cost allocated to flood control and bear all costs of operation, maintenance and replacement of flood control facilities (the cash contribution is deemed satisfied in consideration of the transfer of Grandview State Park to the Federal Government).	0	$100,000
Total Non-Federal Costs	$6,500,000	$100,000

STATUS OF LOCAL COOPERATION: The local assurer for the flood protection project is Grant County, West Virginia. The County has stated their intent to be the non-Federal sponsor and is willing and able to participate in project cost sharing in accordance with the Water Resources Development Act of 1986. Grant County has provided their written commitment to enter into a Project Cooperation Agreement (PCA) by letter dated 8 December 1989. By letter dated 11 June 1991, the County stated that its local funding has been identified towards meeting an accelerated construction schedule. Both the City of Petersburg and the State of West Virginia have indicated their strong support for the project. The PCA was signed in July 1993.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $17,700,000 is an increase of $300,000 over the latest estimate ($17,400,000) submitted to Congress (FY 1995). This change includes the following items:

ITEM	AMOUNT
Post Contract Award and Other Estimating Adjustments	$300,000
TOTAL	$300,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An environmental assessment including Finding Of No Significant Impact was included in the Design Memorandum completed in February 1993.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1990. Funds to initiate construction were appropriated in FY 1993.

In accordance with the Energy and Water Development Appropriation Act of 1993, the cash contribution required under Section 103(a)(1)(A) of the Water Resources Development Act of 1986 for the Moorefield and Petersburg, West Virginia, projects is deemed satisfied in consideration of the transfer of Grandview State Park to the Federal Government. In accordance with the Interior Appropriations Act of 1993, any balance of the park's appraised value will be applied to the local requirement for lands, easements, and rights-of-way on these two projects required by Section 103(a)(1)(B) of the 1986 Act. The value of the park has been appraised by the National Park Service and does not exceed the value of the cash contribution that would otherwise be required by Section 103(a)(1)(A) of the Water Resources Development Act of 1986 for the two projects. Consequently, the local sponsor's share of project costs has been modified to reduce the cash contribution to zero.

APPROPRIATION TITLE: Construction, General - Environmental Restoration

PROJECT: Chesapeake Bay Oyster Recovery, Maryland (Continuing)

LOCATION: The Chesapeake Bay in Maryland.

DESCRIPTION: Section 704 of WRDA 86 authorized the Secretary of the Army to investigate and study the feasibility of using the capability of the Corps of Engineers to conserve fish and wildlife (including their habitats), where such fish and wildlife are indigenous to the United States. The scope of the study includes the use of engineering or construction capabilities to create alternative habitats, or to improve, enlarge, develop or otherwise beneficially modify existing habitats of such fish and wildlife. Section 704, Subsection (b), further authorized the Secretary to conduct projects of alternative or beneficially modified habitats for fish and wildlife, including but not limited to man-made reefs for fish habitat in the Chesapeake Bay in Maryland

AUTHORIZATION: Subsection 704 of the Water Resources Development Act of 1986

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable

TOTAL BENEFIT-COST RATIO: Not applicable.

INITIAL BENEFIT-COST RATIO: Not applicable.

BASIS OF BENEFIT-COST RATIO: Not applicable.

SUMMARIZED FINANCIAL DATA:			ACCUM PCT. OF EST. FED COST	STATUS (1 Jan 1995)	PHYSICAL PERCENT COMPLETE	COMPLETION SCHEDULE
Estimated Federal Cost		$2,500,000				
Estimated Non-Federal Cost:		834,000		Entire Project	0	being determined
Cash Contributions	$834,000					
Other Costs	0					
Total Estimated Project Cost		$3,334,000				

SUMMARIZED FINANCIAL DATA: (CONT'D)

Allocations to 30 September 1994	0		
Conference Allowance for FY 1995	500,000		
Allocation for FY 1995	421,000	1/	
Allocations through FY 1995	421,000		16
Allocation Requested for FY 1996	230,000		26
Programmed Balance to Complete after FY 1996	1,849,000		
Unprogrammed Balance to Complete after FY 1996	0		

PHYSICAL DATA

Annual Oyster Spat Production/Collection	200,000,000
Annual Acres Planted	500

1/ Reflects reduction of $79,000 assigned for savings and slippage and $258,000 in programmed carryover into FY 96

JUSTIFICATION: The Maryland oyster population has declined dramatically since the turn of the century, largely due to the parasitic diseases, MSX and Dermo. These diseases kill oysters before they reach maturity and marketable size As a result, there has been a collapse in the Maryland oyster industry, with the 1993 harvest equating to less than one percent of the harvest 100 years ago. More significantly, the reduced oyster population has adversely impacted water quality in the Bay, due to the smaller size and numbers of oyster beds to filter and clean the water. Activities to restore physical oyster habitat and maintain water quality are critical to the economic and environmental survival of the Chesapeake Bay. These activities include: identification and development of disease free oyster habitat; aquaculture (husbandry) and collection of naturally occurring oyster seed or spat; and planting of oyster seed or spat in locations which best foster oyster reproduction and health.

FISCAL YEAR 1996: The total program amount, including the requested and programmed carryover amounts of $230,000 and $258,000, respectively, will be applied as follows:

Fish and Wildlife	$332,000
Planning, Engineering, and Design	81,000
Construction Management	75,000
Total	$488,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance and Replacement Costs
Pay 25 percent of the cost allocated to fish & wildlife restoration and bear all costs of operation, maintenance, repair, rehabilitation and replacement of fish and wildlife facilities.	$834,000	1/
Total Non-Federal Costs	$834,000	

1/ To be determined once the Corps begins discussions with the State of Maryland on the details of this project.

STATUS OF LOCAL COOPERATION: The State of Maryland is a potential project sponsor. The PCA is tentatively scheduled for execution in March 1996 subject to the completion of the PMP.

COMPARISON OF FEDERAL COST ESTIMATES: The initial Federal cost estimate is $2,500,000.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Environmental compliance documentation will be accomplished as required by law.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1995.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General, FY 1996

1. Navigation

a. Channels and Harbors

The budget estimate of $120,819,000 provides for essential operation and maintenance work on 61 channel and harbor projects named in the list which follows. The work to be accomplished under this activity consists of operating and maintaining the coastal navigation channels, harbors and anchorages by means of dredging, constructing bulkheads and spoil disposal areas, snagging and repairing channel stabilization works, navigation structures, and harbor jetties, all as authorized in the laws pertaining to river and harbor projects.

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items 1. Reason for change in Operations from FY 95 to FY 96 (10% +/-). 2. Major Maintenance items budgeted in FY 96 (Threshold $ 500,000).
Delaware			
Chesapeake & Delaware Canal - St. George's Bridge Replacement	14,000,000 (0) (14,000,000)	14,000,000 (0) (14,000,000)	1. None. 2. None.
IWW, from Delaware River to Chesapeake Bay, DE & MD	12,776,000 (2,606,000) (10,170,000)	16,090,000 (2,727,000) (13,363,000)	1. None. 2. Dredging, repair night lighting and paint Reedy Point bridge
Murderkill River	202,000 (0) (202,000)	40,000 (0) (40,000)	1. None. 2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Delaware (Cont'd)			
Wilmington Harbor	2,931,000	2,513,000	
	(282,000)	(100,000)	1. Dredged material management plan, FY 1995
	(2,649,000)	(2,413,000)	2. None.
District of Columbia			
Washington Harbor	32,000	35,000	
	(0)	(0)	1. None.
	(32,000)	(35,000)	2. None.
Maryland			
Baltimore Harbor and Channels	10,308,000	13,425,000	
	(1,406,000)	(906,000)	1. Coordination of Long Term Management Study with the State of Maryland.
	(8,902,000)	(12,519,000)	2. FY 95 Curtis Bay and Upper Reach deferred to FY 96; Tolchester reach deferred in FY 96.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

   a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Maryland (Cont'd)			
Broad Creek	45,000	360,000	
	(0)	(0)	1. None.
	(45,000)	(360,000)	2. None.
Chester River	575,000	660,000	
	(0)	(0)	1. None.
	(575,000)	(660,000)	2. Dredging.
Crisfield Harbor	0	65,000	
	(0)	(0)	1. None.
	(0)	(65,000)	2. None.
Fishing Bay	0	70,000	
	(0)	(0)	1. None.
	(0)	(70,000)	2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

   a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Maryland (Cont'd)			
Herring Creek	30,000	40,000	
Tall Timbers	(0)	(0)	1. None.
	(30,000)	(40,000)	2. None.
Knapps Narrow	0	782,000	
	(0)	(0)	1. None.
	(0)	(782,000)	2. Dredging.
Nanticoke River	145,000	260,000	
Northwest Fork	(0)	(0)	1 None.
	(145,000)	(260,000)	2. None
Ocean City Harbor & Inlet &	483,000	125,000	
Sinepuxent Bay	(0)	(75,000)	1. None.
	(483,000)	(50,000)	2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

   a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Maryland (Cont'd)			
Twitch Cove & Big Thorofare	0 (0) (0)	150,000 (75,000) (75,000)	1. None. 2. None.
Wicomico River	219,000 (0) (219,000)	615,000 (0) (615,000)	1. None. 2. Dredging.
New Jersey			
Barnegat Inlet	1,129,000 (29,000) (1,100,000)	1,455,000 (130,000) (1,325,000)	1. Beach monitoring, FY 1996 2. Dredging.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	ESTIMATED OBLIGATIONS FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
New Jersey (Cont'd)			
Cheesequake Creek	511,000	2,590,000	
	(0)	(0)	1 None.
	(511,000)	(2,590,000)	2. Dredging and Jetty repair.
Cold Spring Inlet	320,000	485,000	
	(0)	(0)	1. None.
	(320,000)	(485,000)	2. None.
Delaware River at	0	850,000	
Camden	(0)	(0)	1. None.
	(0)	(850,000)	2. Dredging
Delaware River,	14,202,000	18,157,000	
Philadelphia to the	(1,232,000)	(1,481,000)	1. None.
Sea, PA, NJ and DE	(12,970,000)	(16,676,000)	2. Dredging.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
New Jersey (Cont'd)			
Delaware River, Philadelphia to Trenton, NJ	1,093,000 (220,000) (873,000)	1,255,000 (400,000) (855,000)	1. Increase in channel surveys, FY 1996 2. Dredging.
New Jersey Intracoastal Waterway	2,304,000 (383,000) (1,921,000)	3,729,000 (350,000) (3,379,000)	1. None. 2. Dredging and bank stabilization
Salem River	77,000 (29,000) (48,000)	410,000 (0) (410,000)	1. Benefit Cost Ratio, FY 1995 2. None.
Shark River	0 (0) (0)	1,190,000 (0) (1,190,000)	1. None. 2. Dredging.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

   a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
New Jersey (Cont'd)			
Toms River	295,000	290,000	
	(0)	(0)	1. None.
	(295,000)	(290,000)	2. None
New York			
Bay Ridge & Red Hook Channels	313,000	230,000	
	(0)	(0)	1. None.
	(313,000)	(230,000)	2. None.
Browns Creek	448,000	500,000	
	(0)	(0)	1. None
	(448,000)	(500,000)	2. Dredging.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

   a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
New York (Cont'd)			
Buttermilk Channel	147,000 (0) (147,000)	820,000 (0) (820,000)	 1. None. 2. Dredging
East River	98,000 (0) (98,000)	195,000 (0) (195,000)	 1. None. 2. None.
East Rockaway Inlet	299,000 (0) (299,000)	930,000 (0) (930,000)	 1. None. 2. Dredging.
Fire Island to Jones Inlet	0 (0) (0)	1,668,000 (0) (1,668,000)	 1. None. 2. Dredging.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
New York (Cont'd)			
Glen Cove Creek	127,000 (0) (127,000)	130,000 (0) (130,000)	 1. None. 2. None.
Hudson River Channel	120,000 (0) (120,000)	1,380,000 (0) (1,380,000)	 1. None. 2. Dredging.
Hudson River, NY	2,272,000 (1,102,000) (1,170,000)	2,520,000 (1,230,000) (1,290,000)	 1. None. 2. Dredging and lock structure maintenance.
Jamaica Bay	0 (0) (0)	220,000 (0) (220,000)	 1. None. 2. None

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

   a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
New York (Cont'd)			
Jones Inlet	217,000	3,880,000	
	(0)	(0)	1. None.
	(217,000)	(3,880,000)	2. Dredging and Jetty repair
Lake Montauk Harbor	1,310,000	1,930,000	
	(0)	(0)	1. None
	(1,310,000)	(1,930,000)	2. Dredging and Jetty repair.
Mattituck Harbor	850,000	570,000	
	(0)	(0)	1. None.
	(850,000)	(570,000)	2. Jetty repair.
New York Harbor	7,805,000	6,020,000	
	(7,805,000)	(5,520,000)	1. Variation in Dredged Material Management Plans.
	(0)	(500,000)	2. Dredging.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

   a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
New York (Cont'd)			
New York & New Jersey Channels	0 (0) (0)	205,000 (0) (205,000)	1. None. 2. None.
Shinnecock Inlet	148,000 (0) (148,000)	200,000 (0) (200,000)	1. None. 2. None.
Pennsylvania			
Schuylkill River	261,000 (110,000) (151,000)	1,930,000 (110,000) (1,820,000)	1. None. 2. Dredging.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Vermont			
Narrows of Lake Champlain	44,000	645,000	
	(10,000)	(10,000)	1. None.
	(34,000)	(635,000)	2. Dredging.
Virginia			
Atlantic Intracoastal	2,929,000	3,169,000	
Waterway (ACC) & (DSC)	(1,539,000)	(1,687,000)	1. None.
	(1,390,000)	(1,482,000)	2. None.
Channel to Newport News	44,000	590,000	
	(44,000)	(50,000)	1. Survey to identify shoals in FY 96.
	(0)	(540,000)	2. Dredging.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Virginia (Cont'd)			
Chincoteague Bay	0	42,000	
	(0)	(0)	1. None.
	(0)	(42,000)	2. None.
Chincoteague Harbor of Refuge	(0)	36,000	
	(0)	(0)	1. None.
	(0)	(36,000)	2. None.
Chincoteague Inlet	897,000	888,000	
	(159,000)	(43,000)	1. Surveys to identify shoals in FY 95.
	(738,000)	(845,000)	2. Dredging.
Cranes Creek	54,000	321,000	
	(0)	(0)	1. None.
	(54,000)	(321,000)	2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

   a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Virginia (Cont'd)			
Deep Creek	32,000	597,000	
	(0)	(0)	1. None.
	(32,000)	(597,000)	2. Dredging.
Hoskins Creek	215,000	395,000	
	(50,000)	(0)	1. None.
	(165,000)	(395,000)	2. None.
James River	1,301,000	1,616,000	
	(163,000)	(274,000)	1. Dredged material disposal investigation in FY 96
	(1,138,000)	(1,342,000)	2. Dredging.
Norfolk Harbor	7,194,000	5,131,000	
	(498,000)	(786,000)	1. Survey to identify shoals in FY 96.
	(6,696,000)	(4,345,000)	2. Dredging.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

   a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Virginia (Cont'd)			
Queens Creek	0 (0) (0)	337,000 (0) (337,000)	1. None 2. None.
Rudee Inlet	529,000 (127,000) (402,000)	570,000 (120,000) (450,000)	1. None 2. None.
Starlings Creek	52,000 (0) (52,000)	389,000 (0) (389,000)	1. None. 2. None
Tangier Channel	100,000 (0) (100,000)	467,000 (0) (467,000)	1. None. 2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Virginia (Cont'd)			
Thimble Shoal Channel	176,000	1,355,000	
	(176,000)	(185,000)	1. None.
	(0)	(1,170,000)	2. Dredging.
Tylers Beach	0	34,000	
	(0)	(0)	1. None.
	(0)	(34,000)	2. None.
Waterway on the Coast of Virginia	1,167,000	1,268,000	
	(120,000)	(247,000)	1. FY 96 survey and engineering and design associated for dredging.
	(1,047,000)	(1,021,000)	2. Dredging.
Other Projects Maintained Periodically	6,245,500	0	
	(0)	(0)	1. None.
	(6,245,500)	(0)	2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

1. **Navigation** (Cont'd)

   a. **Channels and Harbors** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Total-Channel & Harbor	97,071,500	120,819,000	
	(18,090,000)	(16,506,000)	
	(78,981,500)	(104,313,000)	

   b. **Locks and Dams:** NONE

TOTAL NAVIGATION	97,071,500	120,819,000	
	(18,090,000)	(16,506,000)	
	(78,981,500)	(104,313,000)	

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

2. **Flood Control**

a. **Reservoirs**

The budget estimate of $24,041,000 provides for the operation of 21 flood control reservoirs and scheduling of flood control reservoir operations. Requirements include: operation and ordinary maintenance of project facilities, labor, supplies, materials, and parts for day-to-day functioning; periodic maintenance, repairs and replacements; and contract law enforcement. The requested amount also includes application of special recreation use fees for recreation areas.

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Maryland			
Jennings Randolph Lake	1,423,000	1,604,000	
	(1,212,000)	(1,483,000)	1. Periodic inspection of project and bridges and revise reservoir regulation manual in FY 96.
	(211,000)	(121,000)	2. None.
New York			
Almond Lake	386,000	438,000	
	(364,000)	(418,000)	1. Periodic inspection of service bridge and revise reservoir regulation manual in FY 96.
	(22,000)	(20,000)	2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

2. **Flood Control** (Cont'd)

a. **Reservoirs** (Cont'd)

STATE	ESTIMATED OBLIGATIONS		Reason for Change and Major Maintenance Items
Project Name	FY 1995 ($) Total (Operations) (Maintenance)	FY 1996 ($) Total (Operations) (Maintenance)	
New York (Cont'd)			
Arkport Dam	206,000	226,000	
	(192,000)	(215,000)	1. None.
	(14,000)	(11,000)	2. None.
East Sidney Lake	421,000	483,000	
	(351,000)	(410,000)	1. Revise operation and maintenance and reservoir regulation manuals in FY 96.
	(70,000)	(73,000)	2. None.
Whitney Point Lake	3,701,000	515,000	
	(381,000)	(443,000)	1. Periodic inspection of service/access bridges; revise reservoirs regulation manual in FY 96.
	(3,320,000)	(72,000)	2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

2. **Flood Control** (Cont'd)

a. **Reservoirs** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Pennsylvania			
Alvin R. Bush Dam	550,000	612,000	
	(473,000)	(531,000)	1. Periodic inspection of service/spillway bridges; revise reservoir regulation manual in FY 96.
	(77,000)	(81,000)	2. None.
Aylesworth Creek Lake	191,000	205,000	
	(179,000)	(196,000)	1. None.
	(12,000)	(9,000)	2. None.
Beltzville Lake	812,000	1,425,000	
	(563,000)	(786,000)	1. Increase in water quality analysis, real estate and survey monumentation, FY 96.
	(249,000)	(639,000)	2. Paint service bridges.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

2. **Flood Control** (Cont'd)

a. **Reservoirs** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	ESTIMATED OBLIGATIONS FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Pennsylvania (Cont'd)			
Blue Marsh Lake	2,178,000	2,059,000	
	(1,699,000)	(1,896,000)	1. First year user fee collection and survey monumentation, FY 96.
	(479,000)	(163,000)	2. None.
Cowanesque Lake	2,244,000	2,084,000	
	(1,145,000)	(1,325,000)	1. Periodic Inspection of service bridge and revise reservoir regulation manual.
	(1,099,000)	(759,000)	2. Continuing contract to replace Tompkins Sewage Treatment Plant in FY 95-FY 96.
Curwensville Lake	585,000	669,000	
	(507,000)	(587,000)	1. Periodic inspection of service bridge and revise reservoir regulation manual.
	(78,000)	(82,000)	2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

2. **Flood Control** (Cont'd)

a. **Reservoirs** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Pennsylvania (Cont'd)			
Foster Joseph Sayers Dam	668,000	683,000	
	(556,000)	(606,000)	1. Periodic inspection of service bridge.
	(112,000)	(77,000)	2. None.
Francis E. Walter Dam	1,165,000	675,000	
	(583,000)	(650,000)	1. Survey monumentation, FY 96.
	(582,000)	(25,000)	2. None.
General Edgar Jadwin Dam and Reservoir	213,000	331,000	
	(213,000)	(331,000)	1. Increase in water control analysis, survey monumentation and periodic inspection, FY 96.
	(0)	(0)	2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

2. **Flood Control** (Cont'd)

a. **Reservoirs** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Pennsylvania (Cont'd)			
Prompton Lake	521,000	463,000	
	(369,000)	(458,000)	1. Periodic inspection and survey monumentation, FY 1996.
	(152,000)	(5,000)	2. None.
Raystown Lake	5,330,000	3,426,000	
	(1,934,000)	(2,226,000)	1. Periodic inspection of bridges and revise operation and maintenance and reservoir regulation manuals.
	(3,396,000)	(1,200,000)	2. None.
Stillwater Lake	312,000	373,000	
	(287,000)	(349,000)	1. Periodic inspection of bridge and revise reservoir regulation manual.
	(25,000)	(24,000)	2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

2. **Flood Control** (Cont'd)

a. **Reservoirs** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Pennsylvania (Cont'd)			
Tioga-Hammond Lakes	2,102,000	2,415,000	
	(1,326,000)	(1,712,000)	1. Periodic inspection of bridge and revise reservoir regulation manual.
	(776,000)	(703,000)	2. None.
York Indian Rock Dam	481,000	3,044,000	
	(447,000)	(510,000)	1. Periodic inspection of spillway bridge and revise reservoir regulation manual
	(34,000)	(2,534,000)	2. Repair of deteriorated concrete.
Virginia			
Gathright Dam and	1,348,000	2,169,000	
Lake Moomaw	(1,194,000)	(1,571,000)	1. Dam and tower operations & service facilities.
	(154,000)	(598,000)	2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

2. **Flood Control** (Cont'd)

a. **Reservoirs** (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Scheduling of Flood Control	134,000	142,000	
Reservoir Operation	(134,000)	(142,000)	1. None.
	(0)	(0)	2. None.
Total - Reservoirs	24,971,000	24,041,000	
	(14,109,000)	(16,845,000)	
	(10,862,000)	(7,196,000)	

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

2. **Flood Control** (Cont'd)

b. **Channel Improvements, Inspection and Miscellaneous Maintenance**

The budget estimate of $1,688,000 provides for the essential annual requirement of 2 local flood protection projects, including 10 separate units of the Southern New York projects, and inspection of 86 completed projects during the budget year.

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Maryland			
Cumberland, MD and	92,000	104,000	
Ridgeley, WV	(92,000)	(104,000)	1. Incrsase in contract cost due to remote sites.
	(0)	(0)	2. None.
New York			
Southern New York	756,000	853,000	
Projects	(609,000)	(696,000)	1. Increase due to additional hired labor costs for total contract
	(147,000)	(157,000)	2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

2. Flood Control (Cont'd)

b. Channel Improvements, Inspection and Miscellaneous Maintenance

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Inspection of Completed Projects (Includes the Passaic River Flood Warning System)	680,000 (680,000) (0)	731,000 (731,000) (0)	1. None 2. None
Total-Channel Improvements, Inspection and Miscellaneous Maintenance	1,528,000 (1,381,000) (147,000)	1,688,000 (1,531,000) (157,000)	
TOTAL-FLOOD CONTROL	26,449,000 (15,490,000) (11,009,000)	25,729,000 (18,376,000) (7.353,000)	

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

3. **Multiple Purpose Power Projects** - NONE

4. **Protection of Navigation**

The budget estimate of $10,957,000 provides for accomplishing the work essential to the administration and enforcement of specific laws enacted for the protection of navigation, including the prevention of obstructive and injurious deposits in the tidal waters of three major harbors; removal of drift and debris; and project conditions surveys.

STATE	ESTIMATED OBLIGATIONS		Reason for Change and Major Maintenance Items
Project Name	FY 1995 ($) Total (Operations) (Maintenance)	FY 1996 ($) Total (Operations) (Maintenance)	
Prevention of Obstructive Deposits:			
Baltimore Harbor, MD	510,000 (510,000) (0)	520,000 (520,000) (0)	1. None. 2. None.
New York Harbor, NY & NJ	703,000 (703,000) (0)	740,000 (740,000) (0)	1. None. 2. None.
Norfolk Harbor, VA	200,000 (200,000) (0)	200,000 (200,000) (0)	1. None. 2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

4. Protection of Navigation (Cont'd)

STATE Project Name	ESTIMATED OBLIGATIONS FY 1995 ($) Total (Operations) (Maintenance)	 FY 1996 ($) Total (Operations) (Maintenance)	Reason for Change and Major Maintenance Items
Drift Removal:			
Baltimore Harbor Drift Removal, MD	415,000 (0) (415,000)	455,000 (0) (455,000)	1. None. 2. None.
Hampton Roads Drift Removal, VA	647,000 (0) (647,000)	647,000 (0) (647,000)	1. None. 2. None.
New York Harbor Drift Removal, NY & NJ	4,450,000 (0) (4,450,000)	4,886,000 (0) (4,886,000)	1. None. 2. None.
Removal of Drift & Debris from the Potomac and Anacostia River, DC	730,000 (0) (730,000)	785,000 (0) (785,000)	1. None. 2. None.

NORTH ATLANTIC DIVISION
JUSTIFICATION OF ESTIMATE

APPROPRIATION TITLE: Operation and Maintenance, General FY 1996 (Cont'd)

4. **Protection of Navigation** (Cont'd)

STATE	ESTIMATED OBLIGATIONS		Reason for Change and Major Maintenance Items
Project Name	FY 1995 ($) Total (Operations) (Maintenance)	FY 1996 ($) Total (Operations) (Maintenance)	
Project Condition Surveys	2,617,000 (2,617,000) (0)	2,724,000 (2,724,000) (0)	1. None. 2. None.
TOTAL PROTECTION OF NAVIGATION	10,272,000 (4,030,000) (6,242,000)	10,957,000 (4,184,000) (6,773,000)	
GRAND TOTAL-NORTH ATLANTIC DIVISION	133,842,500 (37,610,000) (96,232,500)	157,505,000 (39,066,000) (118,439,000)	

Mr. MYERS. Thank you, General Hunter, for a very fine presentation.

DISCUSSION OF MAJOR PORTS

I think that sometimes we forget about the size of your responsibility here. There is much commerce coming in and out of the major ports that you operate.

You didn't include Boston. Isn't Boston a port?

General HUNTER. Boston is a port, sir.

Mr. MYERS. That is in New England. It comes to me now. I guess I wasn't thinking.

Norfolk is where most of the coal goes out, is that right? The colliers today, what depth do they require?

General HUNTER. Norfolk Harbor, Mr. Chairman, I think is about 50 feet.

Mr. MYERS. Was part of Baltimore in the process of being deepened to 55 feet in the past year? It seems like they had a project in here a couple of years ago.

General HUNTER. That was Norfolk. I am not familiar with any deepening in Baltimore Harbor to 55 feet.

Mr. MYERS. Well, anyway—I thought some of the big colliers now took 55 feet. There were some ports where they had to short load.

General HUNTER. We have not started deepening at 55 in a project, although we are authorized to go to 55 feet.

Mr. MYERS. Were you aware of any place where they had to unload part of the load a few miles out and haul it in in barges?

General HUNTER. Norfolk, New York and New Jersey.

Mr. MYERS. Of the four ports, how much of the operation and maintenance comes out of the trust fund? Are you aware of how much that would be?

General HUNTER. Mr. Chairman, I do not have that figure ready and available. I can furnish it.

Mr. MYERS. Would you provide it for the record. How much is appropriated—it is all appropriated but how much comes out of the trust account.

General HUNTER. Certainly.

[The information follows:]

$91,282,000 for operation and maintenance of our four ports is subject to recovery from the Harbor Trust Fund in the Fiscal Year 1996 Operations and Maintenance, General budget submitted by the North Atlantic Division.

Mr. MYERS. It seems like we are building up a big account there and sometimes I wonder what is happening to it. Is it really being spent? Are we collecting too much? They are talking about increasing it, aren't they?

Beach maintenance, is a problem in New Jersey as well as Long Island. I have some problems with this. If we are going to stop flood control measures along some major rivers because 50 percent or more of the water doesn't fall in some other State, it seems difficult for me to understand how we can justify spending taxpayers' money elsewhere in the country to maintain our beaches so a few bathers can go out—I am glad they can use it, but it seems to me like the beaches would be where the local people enjoy the recreation areas.

DISCUSSION ON ADMINISTRATION'S NEW POLICIES

I am just commenting here. It is not for comment, because it is not your decision to make whether we fund those. I think we are probably going to ignore, at least not approve, the administration's recommendations for the new criteria.

That goes to my next question. Have you examined some of your projects, in various stages of approval, with regard to what you are going to do in the future if the Congress should go along with the President's recommendations for the new criteria?

General HUNTER. Sir, we have examined our program to look at what our impacts are. In terms of what we will do under the proposed policy, which would require legislative change, is terminate different phases or stages of the project depending on where we are in fiscal year 1996.

Mr. MYERS. Would it be reconnaissance or——

General HUNTER. Reconnaissance, feasibility or preconstruction engineering and design.

Mr. MYERS. I certainly can see where—if we are going to do this it seems like we might as well terminate them all today, except maybe the reconnaissance studies. Generally, it seems like your division's States are small, except possibly New York, where water would probably fall outside the State. Have you examined all the impacts the recommendation of the administration would have on some of the proposed projects?

General HUNTER. Yes, sir. Based on our preliminary analysis, of our seventy-one budgeted items, twenty-one would terminate at phases prior to construction.

Mr. MYERS. Twenty-one?

General HUNTER. Yes, sir.

Mr. MYERS. Leaving how many then for continuation?

General HUNTER. Fifty.

Mr. MYERS. I didn't write those down.

General HUNTER. Twenty-one of the 71. So fifty would be left.

Mr. MYERS. So it is going to have major impact, isn't it?

Again, I will ask the question, how many of your communities are aware that the rug may be jerked out from underneath them? Has there been any effort to notify the governors and the mayors and the county commissioners, everyone that will be affected by this?

General HUNTER. Sir, my districts have been talking with their local sponsors based upon the policy change. I have met with Governor Whitman in New Jersey just last Thursday, a week ago today, talking about Corps of Engineers activities in her State of New Jersey. And I talked about the impact of this policy change on the State of New Jersey.

So I personally talked with her. My district engineers have talked with them in terms of the proposed policy change.

Mr. MYERS. It is going to have a definite impact. I think if it came up in this committee we wouldn't even be considering this, but we don't know what may happen in the full Congress. Because everything is different over there than it was sometimes in the past. Some of it I support, but some of it I don't, some of the new ideas, new concepts.

You have a great many smaller projects in here. We don't know how many of those will be affected except the 21 studies.

How about O&M on some of these reservoirs?

General HUNTER. Sir, in terms of O&M, I have made an assessment of the proposal there. It is of a much larger magnitude. I would like to give you the numbers.

Our preliminary analysis indicates we will begin to phase out 157 small navigation channels and harbors by 1998. In addition to that, we are talking about 11 flood controls channels and one reservoir. So that is the magnitude of the impact. That will be turned back over to the sponsors.

Mr. MYERS. I wonder if the States and local governments realize they will have the responsibility of operating these if this does come about. That is a thing that I think is going to take—they are going to be hammering on us I am sure if they realize they will have the fiscal and financial responsibility.

General HUNTER. I am aware of the fact that they have been informed of the policy change with regard to studies in various stages. I am not aware of the O&M policy change, if they are aware of the magnitude of that.

Mr. MYERS. If flood control doesn't meet the criteria, how can we continue to maintain them?

Mr. Frelinghuysen, I will recognize you.

MR. FRELINGHUYSEN'S OPENING REMARKS

Mr. FRELINGHUYSEN. Mr. Chairman, I apologize for my lateness. I understand General Hunter has not only had a slide presentation but given his testimony. I apologize to you and to the General for my absence.

If I may, Mr. Chairman, I would like to go into some general questions, and I will move with some rapidity.

Mr. MYERS. The hour is yours. You don't need to use it.

ADMINISTRATION'S NEW POLICIES

Mr. FRELINGHUYSEN. There are certain areas of prime concern to me, not the least of which, General—good afternoon to you—are with regard to your budget submission. Were there any studies or projects reduced or eliminated from your original budget submission due to the administration's new policy on shore protection?

General HUNTER. Yes, sir.

Mr. FRELINGHUYSEN. Or flood control for the fiscal year 1996 budget?

General HUNTER. Sir, there were eight projects that were eliminated from the original budget, and five were reduced.

Mr. FRELINGHUYSEN. Could we get for the record the amounts, the dollar amounts?

General HUNTER. Yes, sir, I would be glad to furnish that to you, sir, for the record.

[The information follows:]

Projects eliminated or reduced due to policy changes

Studies and projects eliminated:	
STUDIES	*Amount*
1. Chesapeake Bay Shoreline, Poqouson, VA	$250,000
2. Schuylkill River Basin, Schuylkill Haven, PA	220,000

3. Barnegat Inlet to Little Egg Inlet, NJ	550,000
4. Chesapeake Bay Shoreline, Hampton, VA	500,000
5. Addison, NY	200,000
PED	
1. Willoughby Spit, VA	500,000
2. Saw Mill River at Elmsford and Greenburgh, NY	300,000
CONSTRUCTION	
1. Virginia Beach, VA	1,100,000
Subtotal (8)	$3,620,000
Studies and projects reduced:	
STUDIES	
1. South River, Raritan River, NJ	275,000
2. Milton, PA	245,000
3. North Shore of Long Island, NY	250,000
4. South Shore of Staten Island, NY	300,000
5. Juniata, PA	200,000
Subtotal (5)	$1,270,000
Total funds reduced or eliminated (13)	$4,890,000

Mr. FRELINGHUYSEN. Which of the jobs, General, that you are testifying to will be terminated prior to construction as a result of the administration's new policy on-shore protection and flood control?

General HUNTER. Are you talking in terms of numbers, sir, or specific ones?

Mr. FRELINGHUYSEN. Specific. If you have those specifics, might I get those for the record?

General HUNTER. Yes, sir. There are twenty-one of them.

[The information follows:]

SHORE PROTECTION

Brigantine Inlet to Great Egg Harbor Inlet, NJ
Delaware Bay Coastline, DE
Delaware Coast, Cape Henlopen to Fenwick Island, DE
Great Egg Harbor Inlet to Townsends Inlet, NJ
Jamaica Bay Marine Park and Plum Beach, NY
Long Beach Island, NY
Lower Cape May Meadows and Cape May Point, NJ
Manasquan Inlet to Barnegat Inlet, NJ
Montauk Point, NY
North Shore of Long Island, NY
Raritan Bay and Sandy Hook, NJ
Raritan Bay and Sandy Hook Bay, Cliffwood Beach, NJ
Sandbridge Beach, VA
South Shore of Staten Island, NY
Townsends Inlet to Cape May Inlet, NJ
Yonkers Shoreline, NY

FLOOD CONTROL

Juniata River, PA
Lower Saddle River, NJ
Milton, PA
Raritan River Basin, Green Brook Sub-basin, NJ
South River, NJ

DREDGED MATERIAL MANAGEMENT ISSUES

Mr. FRELINGHUYSEN. Relative, General, to the New York-New Jersey dredged material management issues, and I asked this question the other day, following up on General Chinen's testimony of last year, what is the status of the 40 ocean dumping permit applications in the New York-New Jersey harbor?

General HUNTER. Sir, I would like to first tell you that we have had some success since General Chinen's testimony. We have issued 10 maintenance dredging permits. There is other activity associated with the others that I can outline in more detail for the record.

We did have only one issued the prior year. So we have started to make some success in dredging in the New York-New Jersey Harbor. We are aware of some other initiatives that have certainly been proposed by Governor Whitman, as I talked to her last week, and we will take a look at those.

Mr. FRELINGHUYSEN. You were good enough to inform me of that privately in my office, and I appreciate that.

I have a number of specific questions that relate to that matter, and I would like to submit those into the record, with the Chair's permission.

Mr. MYERS. Without objection.

[The information follows:]

DREDGED MATERIAL MANAGEMENT ISSUES

Mr. FRELINGHUYSEN. Following up General Chinen's testimony of last year, what is the status of the 40 ocean dumping permit applications in the New York - New Jersey Harbor?

General HUNTER. Sir, over the last year we have issued eleven maintenance dredging permits for facilities in the New York - New Jersey Harbor. During the prior year, only one maintenance dredging permit was issued. The following is a breakdown, by type, of the status:

> Nine of the issued permits included ocean disposal of the dredged material.
>
> One of the issued permits had the dredged material being used in the reconstruction of a collapsed bulkhead, because the dredged material failed the criteria for ocean disposal.
>
> One of the issued permits had the small amount of dredged material disposed in an adjacent upland diked area.
>
> One application was denied because the dredged material failed the ocean disposal criteria. The terminal operator is currently exploring disposal alternatives.
>
> Thirteen of the applications are incomplete for issuance of the required public notice until we receive the sediment testing results. Some of these applicants currently have contract laboratories performing this work.
>
> Thirteen of the applications are no longer being actively pursued by the applicants, or were never applications, but just preapplication inquiries. Applications were closed out in response to an applicant's specific request or when they failed to respond to our inquiries.
>
> One permit application with ocean disposal of the dredged material is currently on public notice for required public coordination. The preliminary determination is that the material is acceptable for ocean disposal.
>
> One application is currently on public notice for public coordination purposes. It requests open water disposal in an existing borrow pit in the Lower Bay off Staten Island, NY. This dredged material failed to satisfy the ocean disposal criteria.

Mr. FRELINGHUYSEN. Last year General Chinen indicated that one way to speed up the permit application decision would be to require that the criteria used to review the application and the sediment testing results remain constant throughout the process. What is your opinion on this?

General HUNTER. Sir, I agree with my predecessor's comment. Predictability is essential to maintain public confidence in any regulatory process. During the past year, the Environmental Protection Agency and the Corps developed and implemented an action plan to increase the predictability of the ocean disposal application decision process.

Mr. FRELINGHUYSEN. Do you have any other thoughts on this?

General HUNTER. Sir, I intend to continue to work with the appropriate agencies to make the process more predictable.

Mr. FRELINGHUYSEN. Last year General Chinen indicated there is a disposal crisis in the New York - New Jersey Harbor. Is there still a crisis?

General HUNTER. Sir, there is still a disposal crisis in the New York - New Jersey Harbor. This situation will continue as long as there are not expeditious, predictable, and dependable mechanisms at reasonable costs for the disposal of contaminated materials that must be dredged for safe navigation and environmental restoration.

Mr. FRELINGHUYSEN. General, what is the status of the Corps' efforts to eliminate the dredged material disposal crisis in the New York - New Jersey Harbor?

General HUNTER. Sir, there are several initiatives and activities the Corps is working on. Last year, in partnership with the Environmental Protection Agency, we developed and implemented an action plan to make the permit application review process more predictable for applicants. We are a member of the Dredged Material Management Forum which looks at all dredging and disposal issues. We are currently reviewing New Jersey's Dredging Team's Report which recommends several near term actions for contaminated dredged materials, including the construction of two new borrow pits in Newark Bay. A proposed plan of study for the Dredged Material Management Plan for the New York - New Jersey Harbor has been prepared by the Corps and is currently under review by the Port Authority of New York and New Jersey, the public, and members of the Dredged Material Management Forum. In addition, the Corps is supporting the Environmental Protection Agency to complete work to expand the Mud Dump.

Mr. FRELINGHUYSEN. General, how are all these dredged material management initiatives by the Army Corps within the harbor funded?

General HUNTER. Sir, these efforts are funded by appropriated funds within the Operations and Maintenance, General Appropriation. The permit application processing is funded through the Regulatory, General Appropriation.

Mr. FRELINGHUYSEN. Could you please tell us the progress being made by the Dredged Material Management Forum in the New York - New Jersey Harbor.

General HUNTER. Sir, the Dredged Material Management Forum has identified several areas for short term courses of action and has identified items for further work. Several workgroups are dealing with each of the specific issues related to dredged material management within the harbor estuary.

Mr. FRELINGHUYSEN. General, is the Corps of Engineers continuing to look for upland disposal alternatives for contaminated dredged material for the harbor?

General HUNTER. Yes, sir. Currently we are sharing the results with the states of New York and New Jersey and assisting them in identifying near-term upland disposal sites.

Mr. FRELINGHUYSEN. Please discuss the Corps' efforts under Section 412 of the Water Resources Development Act of 1990 as they relate to develop dredged material disposal alternatives for contaminated dredged material from the New York - New Jersey Harbor.

General HUNTER. Sir, a draft report and study plan has been prepared with the Environmental Protection Agency. We have been incorporating some of the items into our current work efforts with the Dredged Material Management Forum. The draft study plan is currently under review by our non-federal sponsor, the Port Authority of New York and New Jersey, and the Forum.

Mr. FRELINGHUYSEN. General, how does Section 326 and 405 of the Water Resources Development Act of 1992 relate to the efforts to develop dredged material disposal alternatives for the New York - New Jersey Harbor?

General HUNTER. Sir, Section 326 required the creation of a hydrodynamic computer model, including a data collection system, to gain a better understanding of contaminant and sediment dynamics within the New York - New Jersey Harbor and the adjacent portion of the Atlantic Ocean known as the New York Bight. Such model work is ongoing as part of our dredged material management efforts. Section 405 tasked the Environmental Protection Agency and the US Army Corps of Engineers to investigate and assess sediment decontamination technologies for contaminated New York - New Jersey Harbor sediments. With the aid of the US Department of Energy, the States of New York and New Jersey, and members of the Dredged Material Management Forum, we have recently been able to initiate a request for proposals to undertake bench top level evaluations of these state-of-the-art technologies. Upon successful completion of these bench top evaluations, pilot/demonstration projects will be initiated for the most promising technologies.

Mr. FRELINGHUYSEN. Do you have an estimate of when EPA's and the Corps' work will be completed under Section 405 of the Water Resources Development Act of 1992?

General HUNTER. Sir, our work is scheduled for completion by the end of Fiscal Year 1996.

Mr. FRELINGHUYSEN. What is the remaining life-span of the current ocean-disposal site (the Mud Dump) off Sandy Hook?

General HUNTER. Sir, the Mud Dump could last at least another 5 to 6 years for the disposal of clean (category 1) material, but the site has already reached capacity for material which requires capping (category II) under the management guidelines suggested by EPA.

Mr. FRELINGHUYSEN. What action is the Corps taking in view of the limited capacity of the existing Mud Dump for category II material?

General HUNTER. Sir, we are pursuing the use of subaqueous borrow pits for the disposal of sediment that falls into categories II or III. We are also supporting the Environmental Protection Agency in their efforts to expand the existing Mud Dump in order to make the site available for capping Category II materials. In addition, we are actively investigating other possible disposal sites, such as upland and offshore islands.

Mr. FRELINGHUYSEN. Could you provide me with the current status of the Port of New York/New Jersey Dredged Material Management Plan (DMMP)?

General HUNTER. Sir, a plan of study, known as the "Phase I Report" has been drafted and is currently under review. The final Phase I Report is scheduled for completion in June 1995 and we will initiate Phase 2 of the DMMP.

DREDGE MATERIAL DISPOSAL ALTERNATIVES

Mr. FRELINGHUYSEN. In terms of disposal alternatives, can you comment on what possibly could be done in terms of the Corps' work in that regard?

General HUNTER. The traditional disposal site in New York and New Jersey, which is called the mud dump site, has been used for traditional dredging. However, in the new testing protocol that has been submitted by the Environmental Protection Agency, some of the contaminated material will not be suitable for disposal in that particular disposal site.

There are some that can be disposed, but it limits the future use of the mud disposal site. We are looking at and working with the Port of New York-New Jersey at upland sites, Governor Whitman proposed some bore pits in the New York Bay, we are taking a look at that as well.

Mr. FRELINGHUYSEN. You are willing to take a look at that issue and work with other agencies?

General HUNTER. Yes, sir.

RARITAN RIVER BASIN, GREEN BROOK SUB-BASIN, NJ

Mr. FRELINGHUYSEN. I commend you for those efforts.

Relative to the Raritan River Basin, Green Brook Sub-basin, can you give me a status report of that project? Last year, for instance, testimony was received that there might be a completion date of the PED by December of 1996.

General HUNTER. Sir, for the funds that we have in fiscal year 1995 and the funds we are requesting in fiscal year 1996, we will be continuing preconstruction engineering and design. We will complete a draft general reevaluation report by the end of fiscal year 1996, and in fiscal year 1997, we will complete plans and specifications.

Mr. FRELINGHUYSEN. Will the sponsor be advised of the cost of the locally preferred plan?

General HUNTER. Yes, sir.

Mr. FRELINGHUYSEN. And is this one of the projects that will be impacted by the administration's new policy? And if so, how?

A lot of time and effort, as you know, goes into all these projects, and the Army Corps has been a partner with the State and the community, and there is a keen interest on this and other projects as to whether that partnership will continue.

General HUNTER. Sir, the impact will be as we complete the funded phases, we will terminate the project at that point. So as we complete the general reevaluation report in fiscal year 1996, if there are funds to complete plans and specifications, we will terminate at that point and not go to construction.

Mr. FRELINGHUYSEN. That is of prime concern to a number of us in the delegation. If I may, I will submit an additional inquiry relative to that.

[The information follows:]

RARITAN RIVER BASIN, GREEN BROOK SUB-BASIN, NJ

Mr. FRELINGHUYSEN. Last year you testified to a completion of Preconstruction Engineering and Design in December 1996. This year you are showing August 1997 as the completion date. Please explain the eight month delay.

General HUNTER. Sir, the eight month delay is due to the detailed design effort and close coordination with the project sponsor. This schedule is based on the August 1994 revised Project Management Plan that was developed in partnership with local interests.

PASSAIC RIVER MAINSTEM, NJ

Mr. FRELINGHUYSEN. Relative to the Passaic River Mainstem, my predecessor who served on this committee, Chairman Myers I know, we both had a continued interest in moving ahead with providing for some relief for the thousands of people who live in this basin.

Could you tell me when you might complete your investigations into the evacuation buyout alternatives?

General HUNTER. Sir, we plan to complete that in September of this year. We also have scheduled for completion at that time a draft general design memorandum as well as a draft supplemental environmental impact statement. So those three will come to closure at the same time.

Mr. FRELINGHUYSEN. That information has been shared with the Governor?

General HUNTER. Yes, sir.

Mr. FRELINGHUYSEN. So there is good coordination in all respects?

General HUNTER. Yes, sir.

Mr. FRELINGHUYSEN. The WRDA of 1990 as modified by the WRDA of 1992 authorized the construction of environmental and other stream bank restoration measures along the west bank of the Passaic River in the City of Newark. Can you tell me what the status of the preconstruction engineering and design for this part of the project is?

General HUNTER. Yes, sir. We plan to continue preconstruction engineering and design in fiscal year 1996. So basically we plan to complete preconstruction engineering and design.

Mr. FRELINGHUYSEN. Can this portion of the project proceed if the basin-wide solution is not approved, and would it take any legislative action?

General HUNTER. Sir, I am not sure about that. I would have to research that and submit it for the record, if I may.

Mr. FRELINGHUYSEN. I would appreciate it.

I have a number of questions, Mr. Chairman, and I would like to submit those to the record.

[The information follows:]

PASSAIC RIVER MAIN STEM, NJ

Mr. FRELINGHUYSEN. In September 1995, the Corps will provide a decision matrix package to the Governor of New Jersey. What will the Corps do while the Governor is making a decision?

General HUNTER. Sir, while the Governor is making a decision, Fiscal Year 1995 carry-over funds will be used to finalize the General Design Memorandum, Supplemental Environmental Impact Statement, and update of the buy-out plans. In addition, the Preconstruction Engineering and Design of the Joseph G. Minish Passaic River Waterfront Park and Historic Area will continue.

Mr. FRELINGHUYSEN. What is the current status of this project?

General HUNTER. Sir, we are continuing our preconstruction engineering and design activities, including preparation of a draft General Design Memorandum, a draft Supplemental Environmental Impact Statement, draft update of buy-out plans, cost estimating, and design, and design of the Joseph G. Minish Passaic River Waterfront Park and Historic Area.

Mr. FRELINGHUYSEN. What is the status of coordination with the non-Federal sponsor on this project?

General HUNTER. Sir, our investigations of the authorized project and various buy-out options in response to Governor Whitman's February 9, 1994 letter are being closely coordinated with the New Jersey Department of Environmental Protection and the Governor's Office.

Mr. FRELINGHUYSEN. Can the Newark Streambank Restoration measures proceed without legislative action if the basin-wide project is not approved?

General HUNTER. Yes, sir. The Newark Streambank Restoration measures, known as the Joseph G. Minish Passaic River Waterfront Park and Historic Area, was authorized as part of the overall Passaic River Mainstem Project and could proceed independently in time. The design funds for this element are included in the funding appropriations for the overall Passaic River Mainstem Project.

Mr. FRELINGHUYSEN. Section 102(p) of the Water Resources Development Act of 1992 authorized you to establish, operate, and maintain the Passaic Flood Warning System (PFWS). What are you doing to implement this provision?

General HUNTER. Sir, Fiscal Years 1993 and 1994 funds were used to initiate rehabilitation, operation and maintenance of the flood warning system. Fiscal Year 1995 funds are being used to continue the operation and maintenance program which includes upgrading of Base Station Computers, maintenance of network rain and stream gages, and incorporation of the National Weather Service IFLOWS software. The funds requested in Fiscal Year 1996 will be used to continue work.

Mr. FRELINGHUYSEN. What funds remain to be expended from the $17 million appropriated in Fiscal Year 1994?

General HUNTER. Sir, of the funds appropriated in Fiscal Year 1994, $9.2 million remains unexpended as of February 1995. Some of these funds are for the design of the structural project, the nonstructural/buy-out plan, and the Joseph G. Minish Passaic River Waterfront Park and Historic Area (Newark Streambank Restoration). We are projecting carry-over funds to Fiscal Year 1996 of $3.8 million.

Mr. FRELINGHUYSEN. Since the Governor has a preference for a buy-out plan, is it feasible to stop studies on the authorized plan and do more in-depth studies for a buy-out plan with available funds?

General HUNTER. Sir, I believe it would be feasible to stop studies on the authorized plan and continue in-depth studies for a buy-out plan assuming such plans are justified and supported by the sponsor. However, the most appropriate transition point would be at the completion of the draft General Design Memorandum, draft Supplemental Environmental Impact Statement, and draft buy-out plan analysis, scheduled for September 1995.

Mr. FRELINGHUYSEN. Is a new study resolution needed to study a buy-out plan in lieu of the authorized project?

General HUNTER. Sir, I believe we can continue studying buy-out alternatives without further authority assuming such plans are justified and supported by the local sponsor. However, we will be in a better position to judge this situation once the draft report is completed.

Mr. FRELINGHUYSEN. How much would a feasibility study for a buy-out plan cost?

General HUNTER. Sir, a feasibility study for a buy-out project is estimated to cost $7 million.

Mr. FRELINGHUYSEN. How long would it take to complete a feasibility study for a buy-out plan?

General HUNTER. Sir, a feasibility study for a buy-out plan is estimated to take two years to complete.

Mr. FRELINGHUYSEN. From what you know - is a buy-out feasible for Federal participation at any level?

General HUNTER. Sir, based on our investigations to date, as part of a comprehensive plan to reduce flood damages, a limited scale buy-out of localized structures in combination with a structural project may be feasible, however, it would not be eligible for Federal participation under the new flood control policy.

Mr. FRELINGHUYSEN. What additional work would be required to allow the Corps to make a non-structural project recommendation after your present efforts are completed?

General HUNTER. Sir, a feasibility study would be required to allow the Corps to make a non-structural project recommendation when our present efforts on up-dating buy-out plans are completed. However, a new feasibility study would not be undertaken in accordance with the new flood control policy.

Mr. FRELINGHUYSEN. When will the decision document be completed?

General HUNTER. Sir, in September 1995, the Corps will complete a draft General Design Memorandum, draft Supplemental Environmental Impact Statement, and a draft buy-out plan analysis.

BUYOUT PLANS

Mr. FRELINGHUYSEN. But for the record, has the Army Corps ever participated in a buyout plan?

General HUNTER. Sir, we have participated in some limited buyout plans. Several areas that come to mind are in Wisconsin, I think one is, Prairie du Chien in Wisconsin. We also have Clifton and Holbrook in Arizona where they were looking at some buyouts, those flood control projects in that region.

Mr. FRELINGHUYSEN. So the Federal Government did provide some funds?

General HUNTER. Yes, sir. It was coupled with some structural solutions as well.

RARITAN RIVER BASIN, GREEN BROOK SUB-BASIN, NJ

Mr. FRELINGHUYSEN. As I asked you on Green Brook, the impact of the President's initiative on this project would be similar, negatively affected?

General HUNTER. Yes, sir.

ARTHUR KILL CHANNEL-HOWLAND HOOK MARINE TERMINAL, NY AND NJ

Mr. FRELINGHUYSEN. Relative to the Arthur Kill Channel-Howland Hook Terminal, can you give me an update of the status of that project?

General HUNTER. Sir, we have funds in this current fiscal year. What we plan to do with the fiscal 1995 funds is complete the Phase I deepening of the Kill van Kull, narrow the bay channel down to 40 feet—I am sorry, I am looking at the wrong one here.

Mr. FRELINGHUYSEN. New Jersey has quite a lot of projects, Mr. Chairman.

General HUNTER. The Arthur Kill Channel, as I now recall, is the location of the Howland Hook Terminal. We discontinued preconstruction engineering and design back in 1989 because we had a tenant who vacated, basically went bankrupt. We have a new tenant identified by the Port Authority of New York-New Jersey in August 1994, and so we have resumed preconstruction engineering and design.

Mr. FRELINGHUYSEN. You have invested some money in this project already?

General HUNTER. Yes, sir.

RAMAPO RIVER AT OAKLAND, NJ

Mr. FRELINGHUYSEN. Relative to the Ramapo River at Oakland, New Jersey, can you give me an update of the status of that project?

General HUNTER. The funds we have in fiscal year 1995 are being used to develop plans and specifications and complete plans and specifications as well as coordinate a project cost-sharing agreement with the State. We have requested $70,000 in the fiscal year 1996 budget to continue the engineering and design.

However, what we have noted here is that the present costs of $12 million exceeds the maximum authorized cost and would require reauthorization of the project at a higher price level.

Mr. FRELINGHUYSEN. The Governor has raised some concerns about this. Have any of those concerns been resolved?

General HUNTER. The Governor raised some concerns about induced flooding in the area of Wayne. We have answered those concerns and are awaiting response from the Governor's office, but we are continuing with the design.

NEW YORK HARBOR AND ADJACENT CHANNELS, PORT JERSEY CHANNEL, NJ

Mr. FRELINGHUYSEN. Relative to the Port Jersey channel of Bayonne, can you give me a brief update on the study and explain how the fiscal year 1996 funds will be utilized?

General HUNTER. The fiscal year 1996 funds will be used to complete the general design memorandum and initiate the plans and specifications. The current funds we are using will provide additional testing that is required on the material settings as a result of some new testing protocols that were established by the Environmental Protection Agency. So we are continuing with the general design memorandum.

CONCLUSION

Mr. FRELINGHUYSEN. Mr. Chairman, I understand my vote is needed at another committee, a markup. So I would like to ask with your permission, and I apologize to the General, although I am sure he will be happy to respond in writing, I have a number of questions on a great number of projects, and I would appreciate his consideration in responding to each and every one of those, with your permission.

Mr. MYERS. Without objection, we will put it in the record. He will be very happy to respond, I am sure. Good luck with your vote.

Mr. FRELINGHUYSEN. Thank you. Thank you, General.

[The information follows:]

NEW YORK HARBOR AND ADJACENT CHANNELS, PORT JERSEY CHANNEL, NJ

Mr. FRELINGHUYSEN. Please explain how the Fiscal Year 1996 funds will be utilized.

General HUNTER. Sir, Fiscal Year 1996 funds will be used to complete the General Design Memorandum and initiate Plans and Specifications. The completion of the engineering and design effort is contingent on the resolution of the dredged material disposal issue.

DELAWARE RIVER MAIN CHANNEL DEEPENING, DE, NJ, & PA

Mr. FRELINGHUYSEN. Please explain the delay in Preconstruction Engineering and Design completion from October to December 1996.

General HUNTER. Sir, the delay in completion of Preconstruction Engineering and Design was due to an overoptimistic schedule.

SANDY HOOK TO BARNEGAT INLET, NJ

Mr. FRELINGHUYSEN. In the Fiscal Year 1995 Appropriations Act, Congress directed that $900,000 be utilized to initiate construction of Section II (Asbury Park to Manasquan). How will you utilize the funds and when do you anticipate construction to commence?

General HUNTER. Sir, we are proceeding with plans and specifications and negotiation of the Project Cooperation Agreement with the local sponsor. Once the Project Cooperation Agreement is executed, the sponsor will commence real estate acquisition. We anticipate awarding a construction contract in March 1996.

Mr. FRELINGHUYSEN. When do you expect to execute the Project Cooperation Agreement on the Asbury Park to Manasquan Reach?

General HUNTER. Sir, we expect to execute the Project Cooperation Agreement in October 1995.

Mr. FRELINGHUYSEN. Do you anticipate any problems executing the Project Cooperation Agreement on the Asbury Park to Manasquan Reach?

General HUNTER. No, sir. We do not anticipate any problems in executing the Project Cooperation Agreement on the Asbury Park to Manasquan reach.

Mr. FRELINGHUYSEN. How do you plan to deal with the ordnance that has been encountered during your work efforts on Contract 1A for Sea Bright?

General HUNTER. Sir, we are currently coordinating with our design center for ordnance removal in our Huntsville Division to take necessary steps to minimize the effects on Contract 1A and future contracts. We are also coordinating with our Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) point of contact to determine whether borrow area cleanup may be accomplished by using FUDS funding.

Mr. FRELINGHUYSEN. In expediting Section II (Asbury Park to Manasquan) will there be adverse impacts, such as delays, for Section I (Sea Bright to Ocean Township)?

General HUNTER. No, sir. There will be no delays in Section I (Sea Bright to Ocean Township) due to the acceleration of Section II (Asbury Park to Manasquan).

KILL VAN KULL AND NEWARK BAY, NY & NJ

Mr. FRELINGHUYSEN. What is the status of this project to date?

General HUNTER. Sir, with Fiscal Year 1995 funds, we will complete the Phase I deepening of the Kill Van Kull and Newark Bay Channels down to 40 feet. We are also utilizing Fiscal Year 1995 funds to initiate engineering and design for Phase II, which consists of deepening the project to the authorized depth of 45 feet below Mean Low Water, as directed by report language in the Energy and Water Appropriations Act of 1995.

Mr. FRELINGHUYSEN. What is the schedule for completing the Phase II Engineering and Design?

General HUNTER. Sir, our preliminary schedule for completing Phase II Engineering and Design for deepening the Kill Van Kull and Newark Bay Channel, NJ project is June 1997.

Mr. FRELINGHUYSEN. Why is it taking so long to produce a cost for a project that already has a General Design Memorandum?

General HUNTER. Sir, even though a General Design Memorandum has been completed, additional efforts are required to develop a good cost estimate. A complete understanding of the geology of the material that is to be dredged is needed. Major factors are the amount and area that will need blasting versus just dredging, and dredging production rates for various materials. Another factor is the disposal cost of the dredged material if capping is required. The Cost Estimate will be finalized in about 2 years.

Mr. FRELINGHUYSEN. We see there is no budget amount for Fiscal Year 1996, why?

General HUNTER. Sir, we have not requested funding in Fiscal Year 1996 because we will have sufficient carryover from Fiscal Year 1995 to accomplish the work in Fiscal Year 1996.

Mr. FRELINGHUYSEN. Will reauthorization be necessary for the next phase of construction?

General HUNTER. Yes, sir. The Water Resources Development Act of 1986 authorized construction of the Kill Van Kull and Newark Bay Channels at a total cost of $325,000,000. Phase I is expected to cost $300,000,000. The construction cost of Phase II work will exceed the authorized project cost limit, thus reauthorization will be required.

Mr. FRELINGHUYSEN. Are there any disposal problems associated with this project?

General HUNTER. Sir, there are no disposal problems associated with Phase I. We do not know if we will have a disposal problem under Phase II. As part of the Phase II engineering and design, we will be evaluating the impact of the new testing criteria established by the Environmental Protection Agency with regards to disposal of dredged material.

TOMS RIVER, NJ

Mr. FRELINGHUYSEN. In Fiscal Year 1995, funds were provided to initiate dredging of the Toms River. What is the status of this work?

General HUNTER. Sir, we have, in coordination with the State of New Jersey, Department of Environmental Protection, located a suitable disposal area and dredging is scheduled for this summer.

ARTHUR KILL CHANNEL, HOWLAND HOOK MARINE TERMINAL, NY & NJ

Mr. FRELINGHUYSEN. You have previously spent $974,000 on the preconstruction engineering and design effort. Why do you need another three years to complete this effort?

General HUNTER. Sir, since no work has taken place since Fiscal Year 1989, a General Reevaluation Report (GRR) is required to reevaluate the NED plan and update costs and benefits. The GRR is expected to take two years to accomplish, and plans and specifications will take one year.

Mr. FRELINGHUYSEN. Why has the federal cost estimate for the Preconstruction Engineering and Design phase increased from $2.3 million to $2.7 million?

General HUNTER. Sir, the increase in Preconstruction Engineering and Design costs of $400,000 is due to additional required testing of the dredged material sediments as a result of recently established new testing protocols by the Environmental Protection Agency.

Mr. FRELINGHUYSEN. Why hasn't the preconstruction engineering and design resumed with the $500,000 added in Fiscal Year 1994?

General HUNTER. Sir, the preconstruction engineering and design effort was not resumed in Fiscal Year 1994 because a firm deep-draft tenant was not identified for the Howland Hook Marine Terminal until late August 1994. Fiscal Year 1995 funds are being used to resume the work effort.

Mr. FRELINGHUYSEN. Why was this project budgeted in Fiscal Year 1995?

General HUNTER. Sir, this project was budgeted in Fiscal Year 1995 as continuing Preconstruction Engineering and Design based upon sponsor assurances that a deep-draft tenant for Howland Hook Marine Terminal would be identified by Fiscal Year 1995.

Mr. FRELINGHUYSEN. Has a deep-draft tenant been found for the Howland Hook Marine Terminal?

General HUNTER. Yes, sir. The Port Authority of New York and New Jersey identified a new tenant in late August 1994. They have negotiated a lease with the president of Howland Hook Marine Terminal and Container Services, Incorporated. The lease is subject to the Port Authority obtaining a permit to dredge the berthing area at Howland Hook to 40 feet.

Mr. FRELINGHUYSEN. Please provide a status to the permit to dredge berthing areas at Howland Hook?

General HUNTER. Sir, based on new testing criteria, dredged material is unsuitable for ocean disposal. The Port Authority of New York and New Jersey is currently investigating alternatives to ocean disposal such as borrow pits and upland disposal.

RAMAPO RIVER AT OAKLAND, NJ

Mr. FRELINGHUYSEN. Who is the local sponsor and what is their position on this project?

General HUNTER. Sir, the State of New Jersey is the local sponsor and had programmed funds into its budget for Fiscal Year 1995 to cover the non-Federal share of the project cost. However, a letter from the Governor dated February 18, 1994 raised concerns during the review of the General Design Memorandum. The Corps has provided responses to the Governor and we are awaiting the State's reply. The Boroughs of Oakland and Pompton Lakes also support the project.

Mr. FRELINGHUYSEN. Would this project be impacted by the President's new flood control initiatives?

General HUNTER. No, sir. This project is in construction and would not be impacted by the President's new flood control initiatives.

MANASQUAN INLET TO BARNEGAT INLET, NJ

Mr. FRELINGHUYSEN. Congress added funds to initiate a Reconnaissance Report for this Study. What is the status of this study?

General HUNTER. Sir, Fiscal Year 1995 funds will be used to initiate the reconnaissance report in March 1995. Fiscal Year 1996 funds will be used to complete the District Engineer's Reconnaissance Report in March 1996.

Mr. FRELINGHUYSEN. Please describe the study.

General HUNTER. Sir, the study area is located along the Atlantic Coast of New Jersey extending approximately 24 miles from Manasquan Inlet to Barnegat Inlet. The purpose of this study is to investigate shore protection measures.

Mr. FRELINGHUYSEN. What is the relative importance of this study?

General HUNTER. Sir, the study area covers several densely developed communities with a significant year-round population. Continuing erosion of the barrier island threatens the economic vitality of the area. Extensive damage has occurred during numerous major storms, including the coastal storm of March 1962 that resulted in damage to 5,759 structures, costing $8 million at 1962 price levels. The December 1992 storm caused structural damage and extensive beach and dune erosion, with total damages exceeding $2 million at 1992 price levels.

HACKENSACK RIVER BASIN, NJ

Mr. FRELINGHUYSEN. What is the status of this study?

General HUNTER. Sir, a reconnaissance report for flood control was completed in December 1993. The report was favorable for further Federal study in the areas of Berry's Creek in Moonachie, Carlstadt and East Rutherford, New Jersey. However, due to HTRW concerns, the State of New Jersey is no longer willing to sponsor the feasibility phase of this study.

HACKENSACK MEADOWLANDS AREA, NJ

Mr. FRELINGHUYSEN. Congress added $2.5 million in Fiscal Year 1995. How do you plan to utilize these funds?

General HUNTER. Sir, we plan to expend $300,000 in Fiscal Year 1995 to coordinate the scope of work with the project sponsor, prepare a Project Management Plan and execute a Project Cooperation Agreement with the non-Federal sponsor. The remaining $2.2 million will be carried into Fiscal Year 1996 to complete engineering and design and to initiate construction.

Mr. FRELINGHUYSEN. It is our understanding that the Hackensack Meadowland Development Commission (HMDC) requested that the funds be provided as a grant. Are you permitted to provide the appropriated funds as a grant?

General HUNTER. No sir. We are not permitted to provide the appropriated funds as a direct grant. A Project Cooperation Agreement has to be executed with the project sponsor who would cost-share design and construction as authorized by Section 324 of the Water Resources Development Act of 1992.

Mr. FRELINGHUYSEN. Please describe the provisions of Section 324 of the Water Resources Development Act of 1992 and how they relate to the study?

General HUNTER. Sir, Section 324 of the Water Resources Development Act of 1992, authorizes the Secretary to provide design and construction assistance to the Hackensack Meadowlands Development Commission in the following areas: mitigation and enhancement for significant wetlands; development of a regional system to maintain wetlands; water quality monitoring; watershed cleanup at Bellmans and Penhorn Creeks; storm water management research and development; tide gate improvement and reconstruction to control flooding at Berry's Creek drainage system; and, research and development of a water quality improvement program.

Mr. FRELINGHUYSEN. What provisions can the Corps pursue with regard to Section 324?

General HUNTER. Sir, we can pursue all the provisions authorized by Section 324 of the Water Resources Development Act of 1992. However, it is our understanding that the Hackensack Meadowlands Development Commission is primarily interested in the wetlands mitigation provision of Section 324 by creating a wetlands bank in accordance with the Special Area Management Plan that was developed in coordination with the Corps of Engineers, Environmental Protection Agency, National Oceanic and Atmospheric Administration, and New Jersey Department of Environmental Protection.

GREAT EGG HARBOR INLET TO TOWNSENDS INLET, NJ

Mr. FRELINGHUYSEN. What is the status of this study for which Congress added funds as a new start in Fiscal Year 1995?

General HUNTER. Sir, Fiscal Year 1995 funds will be used to initiate the reconnaissance phase in April 1995. Fiscal Year 1996 funds will be used to complete the District Engineer's reconnaissance report in April 1996.

Mr. FRELINGHUYSEN. What is the relative importance of this study?

General HUNTER. Sir, this area is one of the most populated areas along the coast of New Jersey, having a substantial year-round population. Extensive damages have occurred during numerous storms including the March 1962 storm that resulted in damage to 2,629 structures, costing $24 million in 1962 price levels. The December 1992 storm caused structural damages and extensive beach and dune erosion, with total damages exceeding $1,300,000 in 1992 price levels.

NEW YORK HARBOR COLLECTION AND REMOVAL OF DRIFT, NY & NJ

Mr. FRELINGHUYSEN. Congress appropriated funds for construction for Weehawken-Edgewater and Brooklyn 2A, in Fiscal Year 1994. What is the status of these reaches?

General HUNTER. Sir, the Weehawken-Edgewater construction contract was awarded on May 10, 1994. Contract completion is scheduled for September 1995, and will be accomplished within available funding. Based on execution of a Project Cooperation Agreement in September 1995, award of the Brooklyn 2A contract is currently scheduled for February 1996.

Mr. FRELINGHUYSEN. Last year, General Chinen testified that you would execute the Brooklyn 2A Project Cooperation Agreement in June 1994. This year you are reporting it will be executed in September 1995. What caused the delay?

General HUNTER. Sir, the slip in executing the Brooklyn 2A Project Cooperation Agreement was due to delays in receiving the financing plan from the sponsor for the non-Federal repair work, which is required as an item of local cooperation. The City of New York has been unable to provide the financing plan. We are coordinating with the State and the City to resolve this matter.

Mr. FRELINGHUYSEN. The Fiscal Year 1995 Appropriations Act includes report language directing the Secretary to initiate the removal of the derelict vessels on the Passaic River within existing funds. When will you initiate and complete the work for the Passaic Reach?

General HUNTER. Sir, I expect to initiate the work in May 1996 and complete the work in January 1997 with available funds.

Mr. FRELINGHUYSEN. Last year General Chinen testified that you would complete the Passaic River Design Memorandum in September 1994. Please provide me the current status on this.

General HUNTER. Sir, I expect to complete the Design Memorandum for the Passaic Reach in July 1995 and proceed to construction as directed by Congress.

Mr. FRELINGHUYSEN. Congress provided funds in Fiscal Year 1994 for planning, engineering, and design for the Passaic River, Shooters Island, Kill Van Kull, Arthur Kill-NJ, Arthur Kill-NY, Bayonne 2, and Brooklyn 2B reaches. What is the status of these investigations and how are these funds being utilized?

General HUNTER. Sir, engineering and design is continuing in Fiscal Year 1995 for each of the reaches, utilizing Fiscal Year 1994 carryover funds. I will provide the status of each for the record.

[The information follows:]

NEW YORK HARBOR COLLECTION AND REMOVAL OF DRIFT, NY & NJ
STATUS OF DESIGN

REACH	CURRENT STATUS
Passaic River, NJ	Draft Design Memorandum scheduled for completion in February 1995.
Shooters Island, NY & NJ	Draft Design Memorandum scheduled for completion in July 1995.
Kill Van Kull, NY	Draft Design Memorandum scheduled for completion in February 19997.
Arthur Kill, NJ	Draft Design Memorandum scheduled for completion in October 1996.
Arthur Kill, NY	Draft Design Memorandum scheduled for completion in December 1996.
Bayonne 2, NJ	Limited Reevaluation Report scheduled for completion in March 1996.
Brooklyn 2B, NY	Draft Design Memorandum scheduled for completion in September 1995.

Mr. FRELINGHUYSEN. Please explain the reason for the delay in the schedule for engineering and design activities.

General HUNTER. Sir, the delays in the schedule for engineering and design activities were due to the New York District's need to prioritize work efforts due to its large workload and turnover. We will closely monitor the progress on this project to prevent any further slippages.

MOLLY ANN'S BROOK AT HALEDON, PROSPECT PARK, AND PATERSON, NJ

Mr. FRELINGHUYSEN. What is the status of this project?

General HUNTER. Sir, the first construction contract was awarded on January 25, 1995.

Mr. FRELINGHUYSEN. Please explain the one year delay in project completion for which you are testifying.

General HUNTER. Sir, the project sponsor experienced delays in acquiring the necessary real estate.

SALEM RIVER, NJ

Mr. FRELINGHUYSEN. Congress appropriated funds to initiate construction in Fiscal Year 1994. Could you tell me the status of the project?

General HUNTER. Sir, the Project Cooperation Agreement is currently under review and is scheduled for execution in April 1995.

Mr. FRELINGHUYSEN. Could you explain in greater detail the technical questions that have been raised that would slow this project down by one year?

General HUNTER. Sir, the technical questions that have been resolved concern the reliability of future benefits. The questions were raised due to the lack of a historical long term shipper at the Port of Salem.

Mr. FRELINGHUYSEN. Who is the sponsor and proponents for this project and has the sponsor indicated their support?

General HUNTER. Sir, the South Jersey Port Corporation is the project sponsor. They have indicated their support for the project in letters dated 26 August 1994 and 2 December 1994. The State of New Jersey and shipping interests are also proponents of the project.

Mr. FRELINGHUYSEN. Why are you proceeding with a 16 foot depth project rather than the 18 foot depth channel as reported last year?

General HUNTER. Sir, this change is consistent with an Addendum to the Design Memorandum dated September 1994 which was prepared to reflect recent changes in navigation patterns in the project area.

HOPPER DREDGING

Mr. FRELINGHUYSEN. How old is the seagoing dredge McFarland?

General HUNTER. Sir, the dredge McFarland is 28 years old.

Mr. FRELINGHUYSEN. The budget submission indicates the rehab of the McFarland will require an expenditure of $8 million and that the work will be accomplished concurrently with the annual shipyard maintenance. How much will the maintenance work cost?

General HUNTER. Sir, an additional $4 million in normal scheduled maintenance will be performed concurrently with the rehab of the dredge.

Mr. FRELINGHUYSEN. The Corps budget justification documents indicate that the Corps will evaluate whether the McFarland is needed at all while the McFarland is in dry dock. Wouldn't it make more sense to evaluate the need for the vessel by laying it up and contracting out the work before you undertake very expensive work?

General HUNTER. Sir, Dr. Zirschky has stated that existing studies do not provide sufficient certainty that the dredging needs of the country can be met by the private sector alone. Additional data will be collected and Dr. Zirschky anticipates revisiting, in about two years, his decision not to reduce the minimum fleet. A one year period of time may not be sufficient to draw a final conclusion about whether or not private sector capability is adequate on a long term basis. Two years should be sufficient assuming we improve implementation of our dredging information system.

Mr. FRELINGHUYSEN. I understand there are unusually large volumes of material to be removed from the Southwest Pass of the Mississippi River almost every year. Wouldn't it be more economical to schedule the use of private sector dredges for this work rather than deploying the McFarland from the Atlantic Coast where it is home-ported?

General HUNTER. Sir, the majority of the maintenance dredging is performed by private industry and the Corps hopper dredge WHEELER. However, last year critical shoaling developed in the lower Mississippi River that required the use of six dredges, including the MCFARLAND. Sufficient industry dredges were not available.

Mr. FRELINGHUYSEN. How often have you activated the Corps of Engineers Reserve Fleet (CERF) program in which private hopper dredges are contractually obligated to respond within 72 hours of a notice of activation?

General HUNTER. Sir, we have not activated the Corps of Engineers Reserve Fleet since its inception in 1983.

Mr. FRELINGHUYSEN. Do you know whether the CERF has been activated in any Division of the Corps during the past 10 years?

General HUNTER. Sir, I am not aware of any instances of activation of the CERF in any division of the Corps.

Mr. FRELINGHUYSEN. Please provide the total cost of each of the three last shipyard repairs to the McFarland?

General HUNTER. The last three shipyard repairs to the McFarland were $7.1 million, $1.3 million, and $3.9 million for a total of $12.3 million.

Mr. FRELINGHUYSEN. I understand the government-owned and operated hopper dredges are available to respond to national defense requirements. Is this correct?

General HUNTER. Yes, sir. The McFarland and other Government owned and operated hopper dredges are available to respond to national defense requirements.

Mr. FRELINGHUYSEN. How many times have the government-owned dredges been used for national defense during the past 15 years?

General HUNTER. The dredge McFarland has been used for national defense related work at least ten times in the last fifteen years at Mayport, Canaveral, Fernandina, and Pensacola. This dredging has permitted the movement of Trident submarines, as well as aircraft carriers with their supporting fleet, to and from their naval bases. In addition, the McFarland has performed both scheduled and emergency dredging in numerous commercial channels which serve as access to nearby military facilities.

Mr. MYERS. We are spread very thin here right now, General. It is kind of a new responsibility we Republicans have. We don't always know how to handle it, I guess. Chairman Bevill and I have been on this committee for a good many years together and we know how to work together. But the new role and that little chair he has to sit in, there, he is not here now, but he doesn't like that little chair. It wasn't you or anyone else. He gave me the gavel but he took all the money with him.

I have some questions for the record. I think you do quite a bit for others, don't you, both military as well as for local governments?

General HUNTER. Yes, sir.

Mr. MYERS. Could you for the record provide a proportion on how much revenue for work for others is generated in the North Atlantic?

General HUNTER. Yes, sir.

Mr. MYERS. We have a number of other questions, but we are pleased to have you today, in this new role, along with Bruce and William here, and your cheering section. The six Ps you have down pat, don't you? You have brought your own cheering section. You just couldn't fail.

We wish you well. Thank you for the presentation today.

General HUNTER. Thank you, Mr. Chairman.

Mr. MYERS. I hope you will be appearing many times before us here, and we hope all of us will be here to greet you.

The committee will stand adjourned until 10:00 a.m., when we have a review of the Galvin report.

[The information follows:]

NORTH ATLANTIC DIVISION WORKLOAD FOR FISCAL YEAR 1995

The total revenue to be generated by the North Atlantic Division in Fiscal Year 1995 is approximately $1,140,651,000. Our Work For Others portion is approximately $858,499,000 for 75 percent. I will provide the information for the record.

[The information follows.]

NORTH ATLANTIC DIVISION WORKLOAD FOR FISCAL YEAR 1995

PROGRAM	AMOUNT ($000)
CIVIL WORKS	
General Investigation	$ 17,979
Construction, General	79,438
Operation and Maintenance	133,842
Flood Control and Coastal Emergency	1,550
Regulatory	13,900
General Expenses	7,343
Contributed Funds	28,100
Subtotal	$282,152
SUPPORT FOR OTHERS	
Coast Guard	$ 268
Department of Energy	1,354
Federal Housing Administration	39
Federal Aviation Administration	2,792
Federal Emergency Management Administration	1,939
Housing and Urban Development	578
Economic Development Administration	9
General Accounting Office	21,440
National Park Service	300
U.S. Fish and Wildlife	50,060
Bureau of Prisons	806
National Institute of Health	33
Bureau of Printing and Engraving	2,082
Superfund	132,260
EPA Other	1,139
Subtotal	$215,099
MILITARY SUPPORT	
Defense Environmental Restoration Program	51,400
Base Realignment And Closure	114,000
Military Construction	343,000
Air Force	27,000
Army	108,000
Subtotal	$643,400
TOTAL	$1,140,651

FISCAL YEAR 1996 NEW START STUDIES' AUTHORITIES

Mr. MYERS. Please provide for the record the authority for each of the new studies included in your budget request.

General HUNTER. Sir, the authority for each of the new studies included in the Fiscal Year 1996 budget is as follows:

Smith Island Environmental Restoration and Protection, MD, -- U.S. House of Representatives, Committee on Public Works and Transportation resolution adopted 28 September 1994;

Mattituck Harbor, NY, -- U.S. House of Representatives, Committee on Public Works and Transportation resolution adopted 24 September 1992;

Anacostia River Federal Facilities Impact Assessment, MD and DC, -- Section 114 (d) Water Resources Development Act of 1992;

Lower Eastern Shore, MD and DE, -- Section 729, Water Resources Development Act of 1986; and Section 307 Water Resources Development Act of 1990;

Stony Brook, Princeton Township, NJ, -- Section 729, Water Resources Development Act of 1986;

Nansemond River Basin, Suffolk, VA, -- Section 729, Water Resources Development Act of 1986.

SMITH ISLAND ENVIRONMENTAL RESTORATION, MD

Mr. MYERS. Is the Smith Island, Maryland, study consistent with the new Corps policy that states that beach erosion and shore protection work is a local responsibility?

General HUNTER. Sir, the Smith Island, Maryland, study is considered an environmental restoration study and is not impacted by the Corps' new policy.

MATTITUCK HARBOR, NY

Mr. MYERS. Does the Mattituck Harbor, New York, project contribute to the Harbor Maintenance Trust Fund?

General HUNTER. No sir. The Mattituck Harbor New project does not contribute to the Harbor Maintenance Trust Fund.

ANACOSTIA RIVER FEDERAL FACILITIES IMPACT ASSESSMENT, MD & DC

Mr. MYERS. Who are the potential local cost-sharing partners for the feasibility phase of the Anacostia River Federal Facilities Impact Assessment, Maryland and D.C. study.

General HUNTER. Sir, there is no local cost-sharing, since the study will address the potential for environmental restoration activities at Federal facilities.

LOWER EASTERN SHORE OF MARYLAND

Mr. MYERS. You state that the Lower Eastern Shore, Maryland and Delaware, study is needed to develop an effective and comprehensive approach for supporting state and local governments in providing integrated watershed planning, management, and regulation. Why should the Federal Government be involved in local watershed planning activities?

General HUNTER. Sir, the Federal Government is involved in watershed planning with the intention to demonstrate an effective and comprehensive approach for supporting state and local governments in providing integrated watershed planning, management and regulation. Watershed planning studies will focus on the interrelated problems and needs of ecosystem management, including: environmental restoration, wetlands protection and regulation, water quality and conservation, and water resources development.

STONY BROOK, PRINCETON TOWNSHIP, NJ

Mr. MYERS. Why have you listed the Stony Brook, Princeton Township, New Jersey, as a "Special Study" when its appears that the primary purpose is urban flood damage prevention?

General HUNTER. Sir, the Stony Brook, Princeton Township, New Jersey, study is listed as a Special Study because it is a watershed planning activity which addresses multiple purposes, such as, an enhanced flood warning system, water quality, water supply/low flow augmentation, environmental restoration, as well as, urban flood damage prevention.

NANSEMOND RIVER BASIN, SUFFOLK, VA

Mr. MYERS. The Nansemond River Basin, Suffolk, Virginia, study appears to be nothing more than a local watershed planning effort for which there is no apparent Federal interest. Please explain why the Federal Government should have a role in local planning issues.

General HUNTER. Sir, the Nansemond River Basin, Suffolk, Virginia, study is investigating a comprehensive approach for assisting the Commonwealth of Virginia and local communities in Watershed Planning, Management and regulation. The study will identifying the highest priorities, critical problem areas, a wide range of alternatives to address the basin's resources, and the most cost-effective and efficient plans to assist in allocating limited resources at a national level.

HUDSON RIVER HABITAT RESTORATION, NY

Mr. MYERS. If the National Marine Fisheries Service and the U.S. Fish and Wildlife Service desire habitat restoration in the Hudson River, New York, Valley, why shouldn't they provide the funds for this study?

General HUNTER. Sir, the Hudson River habitat restoration is considered a Federal responsibility of the Corps of Engineer because our navigation projects over the past one hundred years have degraded the environment and ecosystem of the river.

Mr. MYERS. When will the feasibility cost-sharing agreement for the Hudson River study be executed?

General HUNTER. Sir, the feasibility cost-sharing agreement for the Hudson River study is scheduled to be executed by September 1995.

REYNOLDS CHANNEL AND NEW YORK STATE BOAT CHANNEL, NY

Mr. MYERS. Does the Reynolds Channel and New York Boat Channel, New York contribute to the Harbor Maintenance Trust Fund?

General HUNTER. Sir, the Reynolds Channel and New York State Boat Channel, New York, do not contribute to the Harbor Maintenance Trust Fund.

OCEAN CITY, MD AND VICINITY WATER RESOURCES

Mr. MYERS. When do you plan to execute the feasibility cost-sharing agreement for the Ocean City and Vicinity, Maryland, study.

General HUNTER. Sir, the Ocean City and Vicinity, Maryland and DC, feasibility cost-sharing agreement is scheduled to be executed by April 1995.

ANACOSTIA RIVER AND TRIBUTARIES, MD & DC

Mr. MYERS. Will there be any duplication of effort between the two studies of the Anacostia River, Maryland and D.C., included in the budget requests?

General HUNTER. Sir, there is no duplication of effort between the two studies on the Anacostia River, Maryland and D.C. Our Anacostia River and Tributaries study is investigating basin-wide regional environmental restoration initiatives in the watershed. Our Anacostia River Federal Facilities impact assessment study is a comprehensive assessment focusing on 25 square miles of Federal facilities lands owned by numerous Federal agencies evaluating environmental impact and measures, such as, sediment and stormwater control, beyond those typically associated with fish and wildlife habitat restoration.

MANASQUAN RIVER BASIN, NJ

Mr. MYERS. What is the status of the Manasquan River Basin, New Jersey, study?

General HUNTER. Sir, the Manasquan River Basin, New Jersey, study was terminated in December 1994 due to lack of economic justification.

SUSQUEHANNA RIVER BASIN FISH RESTORATION, PA, NY & MD

Mr. MYERS. What is the status of the Susquehanna River Basin in Fish Restoration, Pennsylvania, New York, Maryland, study?

General HUNTER. Sir, our study of the Susquehanna River Basin Fish Restoration, Pennsylvania, New York and Maryland, is being delayed due to the execution of the feasibility cost-shared agreement with the local sponsor.

RARITAN BAY AND SANDY HOOK BAY, NJ

Mr. MYERS. Last year you indicated that the feasibility cost-sharing agreement for the Raritan Bay and Sandy Hook Bay, New Jersey, project was executed on December 30, 1993. This year you indicate it was executed on February 10, 1994. What is the correct date?

General HUNTER. Sir, the correct date is February 10, 1994.

ATLANTIC COAST OF NEW YORK, NY

Mr. MYERS. Will the Atlantic Coast of New York, New York study be cost-shared?

General HUNTER. No sir. This study is being done pursuant to Section 404 of the Water Resources Development Act of 1992, which did not specify any cost-sharing.

NEW YORK HARBOR AND ADJACENT CHANNELS, CLAREMONT TERMINAL, NJ

Mr. MYERS. Why has the date of completion of preconstruction engineering and design for the New York Harbor and Adjacent Channels, Claremont Terminal, New Jersey, project slipped by almost two years.

General HUNTER. Sir, the completion date for the preconstruction engineering and design for the New York Harbor and Adjacent Channels, Claremont Terminal, New Jersey, project has slipped by almost two years due to problems associated with the disposal of dredged material.

ATLANTIC INTRACOASTAL WATERWAY AT GREAT BRIDGE, VA

Mr. MYERS. Is the Atlantic Intracoastal Waterway, Great Bridge, Virginia, project authorized for construction?

General HUNTER. No sir. This project is not authorized at the time.

VIRGINIA BEACH, VA

Mr. MYERS. What is the status of preconstruction engineering and design on the Virginia Beach, Virginia, project?

General HUNTER. Sir, we will be completing preconstruction engineering and design on the Virginia Beach, Virginia, project with the funds provided in Fiscal Year 1995, including coordination of a draft project cooperation agreement, a financing plan, a Feature Design Memorandum for the interior drainage and pumps, and preparation of Plans and Specifications for the first construction contract.

ANACOSTIA RIVER AND TRIBUTARIES, MD & DC

Mr. MYERS. Has a benefit-cost ratio been completed for the Anacostia River and Tributaries, Maryland and D.C., project?

General HUNTER. Sir, there is no benefit-cost ratio for our environmental restoration project for the Anacostia River and Tributaries, MD and DC. Benefits were expressed in non-monetary terms, such as, habitat units.

Mr. MYERS. Is the project authorized for construction?

General HUNTER. No sir. The project is not authorized for construction at this time.

MUSSERS DAM, PA

Mr. MYERS. How are the funds provided in Fiscal Year 1995 for the Mussers Dam, Pennsylvania, project being utilized?

General HUNTER. Sir, the funds provided in Fiscal Year 1995 for the Mussers, Dam, Pennsylvania, project are being utilized to complete preconstruction engineering and design within the funds provided.

NEW YORK HARBOR AND ADJACENT CHANNELS, PORT JERSEY CHANNEL, NJ

Mr. MYERS. When will the project cooperation agreement for the New York Harbor and Adjacent Channel, Port Jersey Channel, New Jersey, be executed?

General HUNTER. Sir, the project cooperation agreement is scheduled to be executed in the second quarter of Fiscal Year 1997. This schedule is dependant on the resolution of the dredged material disposal issue.

Mr. MYERS. When will construction begin?

General HUNTER. Sir, construction is scheduled to be initiated in September 1997.

KILL VAN KULL AND NEWARK BAY CHANNEL, NY & NJ

Mr. MYERS. Will the Kill Van Kull and Newark Bay, New York and New Jersey, project be completed this September as scheduled?

General HUNTER. Yes Sir. Contracts 4b and 4c are scheduled to be completed in September 1995.

DELAWARE COAST PROTECTION, DE

Mr. MYERS. When will the authorized periodic nourishment period for the Delaware Coast Protection, Delaware, project end?

General HUNTER. Sir, the authorized periodic nourishment is scheduled to be completed in September 2021.

SANDY HOOK TO BARNEGAT INLET, NJ

Mr. MYERS. The Fiscal Year 1996 program for the Sandy Hook to Barnegat Inlet, New Jersey, project includes $9,400,000 carried over from Fiscal Year 1995. How confident are you that you will be able to execute the Fiscal Year 1996 program contained in the budget request?

General HUNTER. Sir, I am very confident that I will be able to execute the program scheduled for the Fiscal Year 1996.

MOLLY ANN'S BROOK AT HALEDON, PROSPECT PARK AND PATERSON, NJ

Mr. MYERS. When will construction of Molly Ann's Brook, New Jersey, project begin?

General HUNTER. Sir, I am happy to report that the first construction contract was awarded on January 25, 1995.

HACKENSACK MEADOWLANDS AREAS, NJ

Mr. MYERS. How are the funds provided in Fiscal Year 1995 for the Hackensack Meadowlands, New Jersey, project being utilized?

General HUNTER. Sir, we plan to expend $300,000 in Fiscal Year 1995 to coordinate the scope of work with the project sponsor, prepare a Project Management Plan, and execute a Project Cooperation Agreement with the non-Federal sponsor. The remaining $2.2 million will be carried into Fiscal Year 1996 to complete engineering and design, and initiate construction.

BROAD TOP REGION OF PENNSYLVANIA

Mr. MYERS. What is the status of the Broad Top Region Pennsylvania, project?

General HUNTER. Sir, the General Management Plan for the Broad Top Region of Pennsylvania project is scheduled to be completed in March 1995. The General Management Plan identifies potential projects to restore watersheds, eliminate health and safety problems, improve water quality, and protect municipal water supplies.

SOUTH CENTRAL PENNSYLVANIA ENVIRONMENT RESTORATION STUDY, PA

Mr. MYERS. How are the funds provided in Fiscal Year 1995 for the South Central Pennsylvania Environmental Restoration, Pennsylvania, project being utilized?

General HUNTER. Sir, Congress appropriated $7,000,000 in the Fiscal Year 1995 Energy and Water Development Appropriation Act. These funds, along with $10,000,000 included in the Fiscal Year 1994 Energy and Water Development Act are being used to provide wastewater treatment plants for the Forest Hills Municipal Authority, Altoona City Authority, Chestnut Ridge Joint Area Municipal Sewer Authority, and Broad Top Township and Coaldale Borough.

CHESAPEAKE AND DELAWARE CANAL, DE, ST. GEORGE'S BRIDGE REPLACEMENT

Mr. MYERS. When will the St. George's Bridge, Delaware, replacement project be completed?

General HUNTER. Sir, the replacement for the St George's bridge is scheduled for completion in September 1995. The highway approaches in the vicinity of the bridge may not be completed until a few months later which could delay opening of the bridge to traffic.

DRIFT REMOVAL AND PREVENTION OF OBSTRUCTIVE DEPOSITS

Mr. MYERS. Please explain for the record the various drift removal and prevention of obstructive deposits projects.

General HUNTER. Sir, Prevention of Obstructive Deposits and Drift Removal activities are authorized for the Ports of New York, Baltimore and Norfolk. The prevention of Obstructive Deposits prohibits unpermitted discharge into harbor waters which would obstruct navigation or would injure vessels in the harbor. The program provides for the investigation, assessment, surveillance, and resolution of alleged deposits and obstructions to navigation. The Drift Removal projects are authorized to collect, remove, and dispose of drift from the navigable waterways. These authorizations are limited to the collection of floating debris in navigation channels that pose a hazard to navigation. The Water Resources Development Act (WRDA) of 1974 was modified by the Water Resources Development Act of 1990 Section 102(v) which extended the removal authorization in New York Harbor to include collection of floatables such as plastics, rubber, cardboard, and styrofoam in concert with the City of New York and the Environmental Protection Agency.

Mr. MYERS. Are these projects authorized?

General HUNTER. Yes, sir. The New York Drift Removal Projects for New York were authorized by the Rivers and Harbors Acts of 1915, 1917 and 1930; the Baltimore Harbor Drift Removal project by the River And Harbor Act of 30 June 1948; and Hampton Roads Drift Removal Act by the Harbor Act of 1950. The Prevention of Obstructive Deposits projects for New York, Baltimore and Norfolk Districts were authorized by Section 5 of the 1888 Act as amended in 12 July 1952 and 28 August 1958.

Mr. MYERS. To the best of your knowledge, does the Corps perform similar work in the other parts of the country?

General HUNTER. Yes, sir. The Corps performs similar work in the South Pacific Division.

TUESDAY, FEBRUARY 28, 1995.

REMAINING ITEMS

WITNESSES

MAJOR GENERAL STANLEY G. GENEGA, DIRECTOR OF CIVIL WORKS
DON B. CLUFF, CHIEF PROGRAMS MANAGEMENT DIVISION, DIRECTORATE OF CIVIL WORKS
ED DICKEY, CHIEF OF PLANNING
BILL ROPER, DEPUTY DIRECTOR OF RESEARCH AND DEVELOPMENT
DAN BURNS, CHIEF OF OPERATIONS, CONSTRUCTION AND READINESS
PAUL BARBER, CHIEF OF ENGINEERING
DAVID SANFORD, ACTING CHIEF OF POLICY REVIEW AND ANALYSIS

OPENING REMARKS

Mr. MYERS. The committee will come to order.

And this morning we have the pleasure of welcoming back the Corps of Engineers to wrap up all the loose ends.

General Genega, we are pleased to have you back. You have a prepared statement and it will be in the record and you may summarize if you like.

STATEMENT OF GENERAL GENEGA

General GENEGA. Thank you. Mr. Chairman, and members of the subcommittee. I am honored to appear before you for the third time in support of the fiscal year 1996 Army Civil Works budget.

With me is Mr. Don Cluff, Chief of Programs Management. Seated behind me are Dr. Ed Dickey, Chief of Planning; Mr. Dan Burns, Chief of Operations, Construction and Readiness, who replaced Mr. Elmore; Mr. Dave Sanford, Acting Chief of Policy Review and Analysis; Mr. Paul Barber, Chief of Engineering; and Dr. Bill Roper, Deputy Director of Research and Development.

The total request for Remaining Items is about $548 million, which represents an increase of $98 million from this current year. The request is divided by account, as you see on this slide.

GENERAL INVESTIGATIONS

In the General Investigations account, our Remaining Items request is about $85 million. The request includes $15 million for Flood Plain Management Services, an increase of $7 million from the current year. These services help State and local governments plan and initiate their own activities to reduce flood losses. The increase reflects a growing awareness of the flood hazard and increased interest in nonstructural approaches to flood damage reduction.

The funding will also provide increased technical assistance to Native American tribes.

We are requesting $6 million for the Planning Assistance to State Programs. This is an increase of $3.8 million which takes the program to its statutory limit. In the aftermath of major floods in the Midwest in 1993, Georgia, Florida, and Texas in 1994, and California early this year, demand for assistance is up. Moreover, in the Water Resources Development Act of 1992, the program was expanded to include Native American tribes, also contributing to the increased demand.

The request includes $500,000 to initiate a program to improve the technical accuracy and quality of flood and storm damage data, including the relationship of flood characteristics to property damage. This program will allow timely collection of data when floods occur. It will enable us to develop a national flood damage database to support both our individual studies and research.

We are requesting $500,000 to begin a six-year $7 million initiative for geographic information system research. This will improve our storage and analysis of geographic data. The new technology will be integrated with existing data and will enhance our exchange of geographic data with others.

CONSTRUCTION, GENERAL

Turning to Construction, General, our Remaining Items total about $101 million. The request for Continuing Authorities totals $41 million, which will facilitate the orderly closeout of existing projects and meet our commitments to non-Federal sponsors.

Under section 1135 of the Water Resources Development Act of 1986, we will increase our efforts to improve the environment by modifying existing Corps projects. The request for $25 million is a substantial increase over this year's $8 million and takes us to the statutory limit. It reflects our expectation that recent changes to streamline our process will produce a more robust program.

OPERATION AND MAINTENANCE, GENERAL

In Operation and Maintenance, our request is $64 million. Programs covered by this request ensure the availability of technical expertise and information which can be used by all districts to maintain their projects.

Dredging costs are increasing as we deal with contaminated sediment found in harbors and waterways and industrial areas. Continued research will provide cost-effective and environmentally-sound remedies. Therefore, we propose to launch a new dredging operation and environmental research program.

We are requesting funds to start the pollution prevention program needed to meet the requirements of Executive Order 12856. This program will focus on source reduction of pollutants. The funds will be used for pollution prevention assessments and prevention plans that will save money later by reducing later compliance and cleanup costs.

We are proposing two initiatives that will enhance the conservation of natural resources on Corps project lands. The Wetlands Action Plan involves an inventory of wetlands to help us analyze measures, establish goals and set priorities. On a broader scale, the natural resources inventory will assist us in long-term protection of other natural resources located on our project lands.

The Corps O&M Plan of Improvement was selected as a pilot program in accordance with the Government Performance and Results Act of 1993. All plan measures will be in place at the end of fiscal year 1995 with the exception of the performance measurements system for which we are asking funds. The plan when fully implemented will decentralize decision-making and focus accountability at our project level.

REGULATORY PROGRAM

To continue our administration of Section 404 and other Regulatory Programs and to implement the President's Wetlands Action Plan, we are requesting $112 million for the Regulatory Program and $11 million increase from this year. In addition to inflation, the increase is primarily directed at introducing a new administrative appeals process for permit denials and jurisdictional determinations.

With the help of the additional funding this committee has provided over the last three years, which has gone principally to increased staffing, we are continuing to provide decisions on over 90 percent of our permits within 60 days. Last year we reviewed and authorized about 65,000 activities compared to 55,000 in 1993.

CENTRALIZED ACCOUNTS

As indicated in our previous testimony by the Chief last week, the Corps has eliminated headquarter centralized accounts from the budget. The centralized accounts themselves have either been terminated, included as a line item in what we feel is the appropriate account, or funded on a fee for service basis.

GENERAL EXPENSES

The General Expenses request is approximately $165 million, an increase of $12.5 million. The request consists of two components, approximately $158 million for the basic operating expenses of our headquarters, 11 divisions and four support activities, and $7 million for the newly-established Program Accounts.

The Program Accounts consist primarily of formerly centralized headquarters activities which we believe should be continued through direct funding.

The 520 FTE in the headquarters are approximately one-third of the total GE staffing, and less than 2 percent of the total civil works work force. This slide shows the downward trend in GE staffing from 1989 to 1996. The headquarters civil staff has been reduced by 24 percent, while the overall GE funded staff has been reduced 15 percent. The field staff, our districts, are down 7 percent for that same period. We anticipate further staffing reductions as part of the streamlining plans of the administration and out year budget trends.

PLANT REPLACEMENT AND IMPROVEMENT PROGRAM

We estimate our Plant Replacement and Improvement Program, PRIP, obligations and expenditures under the revolving fund at approximately $93 million in Fiscal Year 1996. This includes six new items, among them a $14 million gate-lifter crane barge similar to the one in this slide.

In response to your surveys and investigations report, we have made significant policy changes to improve our PRIP management. This will provide appropriate plant rental charges, tighter controls on expenditures and will limit the acquisition of nonconstruction plant and equipment with PRIP dollars.

AUTOMATION

Also, in response to the committee's direction, we have refocused the Information Systems Modernization Program. Rather than trying to continue the development of our own logistics program, we have entered into a partnership with the Army Strategic Logistics Agency to use existing systems in our management.

We have also asked the Department of Army Major Automated Informations Systems Review Council to look at our modernization program as a whole, as they did in September. The Army Informations System Command's economic analysis indicated, based on preliminary results, a benefit to cost ratio of 2.4 to 1. We are now complying with all Department of the Army oversight requirements.

That concludes my summary remarks, Mr. Chairman. I will be happy to take your questions.

[The prepared statement of General Genega follows:]

DEPARTMENT OF THE ARMY - CORPS OF ENGINEERS
OFFICE OF THE CHIEF OF ENGINEERS

DETAILED STATEMENT
OF
MAJOR GENERAL STANLEY G. GENEGA
DIRECTOR OF CIVIL WORKS
ON THE REMAINING ITEMS OF THE FISCAL YEAR 1996
CIVIL WORKS BUDGET

PRESENTED BEFORE THE SUBCOMMITTEE ON
ENERGY AND WATER DEVELOPMENT
COMMITTEE ON APPROPRIATIONS
OF THE HOUSE OF REPRESENTATIVES

FEBRUARY 28, 1995

DEPARTMENT OF THE ARMY - CORPS OF ENGINEERS
OFFICE OF THE CHIEF OF ENGINEERS

DETAILED STATEMENT
OF
MAJOR GENERAL STANLEY G. GENEGA
DIRECTOR OF CIVIL WORKS
ON THE REMAINING ITEMS OF THE FISCAL YEAR 1996 CIVIL WORKS BUDGET

PRESENTED BEFORE THE SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT,
COMMITTEE ON APPROPRIATIONS, OF THE HOUSE OF REPRESENTATIVES

FEBRUARY 28, 1995

INTRODUCTION

Mr. Chairman and members of the Subcommittee, I am honored to testify before you as Director of Civil Works.

I would like to note some highlights of the FY 1996 budget request for Remaining Items, which include the Corps nationwide programs and activities. These include the General Expenses appropriation, which provides for executive direction and management of the Civil Works program at the Corps Headquarters and the Division Offices.

REMAINING ITEMS OVERVIEW

The total for Remaining Items in the budget request is $554.542 million of which $91.093 million is for General Investigations, $101.489 million for Construction, General, $64.385 million for Operation and Maintenance, General, $112 million for Regulatory Program, $20 million for Flood Control and Coastal Emergencies, $164.725 million for General Expenses, and $850,000 for Oil Spill Research.

ACTIVITIES UNDER THE GENERAL INVESTIGATIONS APPROPRIATION

ENVIRONMENTAL SERVICE PARTNERSHIPS

The FY 1996 budget includes $0.615 million to complete a five-year demonstration program aimed at increasing private sector participation in provision of certain environmental service facilities. A major component of the demonstration program is the carrying out of market feasibility studies to determine opportunities for public-private partnerships that appear to offer sound investments.

NATIONAL DREDGING NEEDS STUDY OF PORTS AND HARBORS

The FY 1996 budget also includes $0.909 million to complete this three year, $2,500,000 study of national port and harbor dredging needs. The study is in response to Section 402 of the Water Resources Development Act of 1992 which authorized the conduct of such studies as necessary to provide a report to Congress which assesses the dredging needs of the national ports and harbors of the United States.

PRESIDENT'S CLIMATE CHANGE ACTION PLAN

The President's Climate Change Action Plan was developed to reduce "greenhouse" gas emissions to 1990 levels by the year 2000 and provides for the private sector to invest in identified hydropower improvements in exchange for the lease of the development rights. By increasing the capacity of existing Federal hydropower, the need to build additional fossil fueled generation will be reduced along with the emissions and the costs of the investor would be fully recovered from the sale of the electricity generated.

In response to the President's Plan, the FY 1996 request includes $600,000 to complete examination of potential hydroelectric power updating opportunities at Corps facilities.

NATIONAL ASSESSMENT OF WATER SUPPLY DEMAND AND AVAILABILITY

The FY 1996 budget includes $3 million to continue this three year $5.5 million effort to collect data, refine and apply models, and undertake an extensive collaborative effort with public interest groups, water management institutions, and water users. In the 20 years since the 1975 U.S. Water Resources Council's Second National Water Assessment, many national policies related to water quality, wastewater treatment, and environmental protection have substantially altered the way in which water is used. Water for ecosystem maintenance will continue to compete with traditional economic uses of water. This study will include development of a realistic water use and availability forecast to aid policy-making, as well as identification of critical water supply conflicts,, assessment of ecosystem based water demands and examination of opportunities for increasing water use efficiency. This initiative is the subject of an FY 1995 reprogramming of $500,000 submitted to this committee on February 7, 1995.

COOPERATION WITH OTHER FEDERAL AGENCIES, STATES, AND NON-FEDERAL INTERESTS

The request for Cooperation with Other Federal Agencies, States, and non-Federal Interests is $14.79 million, an increase of $5.92 million from the FY 1995 allocation of $8.870 million for these activities. Following is a comparison of the FY 1995 allocation and the FY 1996 request for activities under this program:

ACTIVITY	FY 1995 Allocation	FY 1996 Request
Cooperation with other Water Resources Agencies	600,000	600,000
Planning Assistance to States	2,150,000	6,000,000
Special Investigations	3,780,000	5,830,000
Interagency Water Resources Development	1,200,000	1,200,000
National Estuary Program	220,000	230,000
North American Waterfowl Management Plan	220,000	230,000
National Marine Fisheries Service	200,000	200,000
Inventory of Dams	500,000	500,000

A major portion of this request is $6 million for Planning Assistance to States, including all 50 states, the District of Columbia, Puerto Rico, the Virgin Islands American Samoa, Guam, the Commonwealth of the Northern Mariana Islands and Federally-recognized Indian Tribes. The Program is cost-shared at 50% Federal, 50% non-Federal. Since FY 1991, we have executed over 260 cost-sharing agreements with 45 states and 15 Indian Tribes.

This request represents a significant increase over the FY 95 allocation, for several reasons. The Report of the Interagency Floodplain Management Review committee made recommendations which place increased emphasis on comprehensive environmental and flood plain management planning. In addition, efforts to improve government-to-government cooperation with Indian Tribes have generated an increased demand from Indian Tribes for technical assistance. The flexibility of the Program allows the Corps to provide technical assistance for a wide variety of purposes, including planning for ecosystem restoration and management. Under this program, we coordinate with and assist State and Indian Tribe planners to prepare comprehensive plans for conservation, development, and utilization of their water and related resources and help them become more active and effective working partners with the Federal government in resolving water resources problems of mutual interest. The growing awareness of the Program by the states and Indian Tribes led to major increases in requests for assistance in late FY 94 and FY 95.

Another major portion of the request is $5.83 million for Special Investigations, including: review of applications referred to us by the Federal Energy Regulatory Commission for permits or licenses for non-Federal hydropower developments at, or affecting, Corps water resource projects; review of reports and environmental impact statements of other agencies, and special studies and initial assessments of water resources problems in response to local requests not elsewhere funded. Examples of such special studies include; the Gulf of Mexico Program which is an interagency effort to resolve complex environmental problems associated with man's use of the Gulf of Mexico and the interagency Scientific

Assessment and Strategy Team responsible for providing scientific advice and assistance to officials responsible for making decisions with respect to flood recovery in the upper Mississippi River basin.

Additionally there is $600,000 for cooperation with other water resources agencies and $230,000 each to continue cooperation with Federal and state agencies in the Environmental Protection Agency's National Estuary Program and with Federal and state agencies, and non-Federal interests in support of the North American Waterfowl Management Plan administered by the U.S. Fish and Wildlife Service. Also under this category of cooperation is a $200,000 request to continue participation with the National Marine Fisheries Service in planning and evaluating fish habitat restoration and creation of opportunities. The FY 1996 request to continue National Inventory of Dams is $500,000. Legislation will be proposed to indefinitely extend the dam inventory program. The balance of the request is $1.2 million for continuing interagency water resources development.

COLLECTION AND STUDY OF BASIC DATA

The request of $29.605 million for Collection and Study of Basic Data is an increase of $12.78 million from the FY 1995 allocation of $16.825 million for these activities. Following is a comparison of the FY 1995 allocation and the FY 1996 request for activities under this program:

ACTIVITY	FY 1995 Allocation	FY 1996 Request
Coastal Field Data Collection	3,950,000	4,000,000
Environmental Data Systems	155,000	160,000
Flood Plain Management Services	7,950,000	15,000,000
Hydrologic Studies	890,000	770,000
International Water Studies	500,000	500,000
Precipitation Studies (National Weather Service)	650,000	550,000
Scientific and Technical Information Centers	300,000	350,000
Stream Gaging (U S Geological Survey)	880,000	770,000
Transportation Systems	1,250,000	950,000
Remote Sensing Support	300,000	400,000
Flood Damage Data	0	500,000
Automated Information System Support	0	3,605,000
National Spatial Data Infrastructure	0	2,050,000

Three new activities are included in the FY 1996 Budget request.

Flood Damage Data Collection. The FY 1996 budget request includes $500,000 to initiate a program to improve the technical accuracy and quality of flood and storm damage data including the relationship of flood characteristics to property damage. This program will facilitate the timely collection of data when a damaging event occurs and the development of a national flood damage database to support local, state and Federal studies and research.

Automated Information Systems Support. The FY 1996 request for this activity is $3.605 million to continue work previously funded by the centralized funding account and is the Civil Works proportional share of the expenses for the following specific items: Computer Application in Geotechnical Engineering, computer Aided Structural Engineering, Geotechnical Aspects of Computer Aided Structural Engineering, Pavement Transport Computer Assisted Structural Engineering and Numerical Model Maintenance Program.

National Spatial Data Infrastructure. The FY 1996 request for this activity is $2.05 million to continue work previously funded with General Expenses funds. The funds will support the participation of Corps laboratories and districts in field advisory groups to develop Corps-wide geospatial data policies and practices and implementation plans to provide channel and hydrographic data to the National Spatial Data Infrastructure (NSDI) framework. Also, included are site and project specific efforts to organize Corps geospatial data that will contribute to the NSDI as required by E.O. 12906. This will provide public access via an Internet Clearinghouse to Corps data in standard exchange formats and help prevent collection of duplicate data.

Two of the largest programs, Flood Plain Management Services and Coastal Field Data Collection will be highlighted individually.

Flood Plain Management Services. The largest portions of the Collection and Study of Basic Data request is $15 million for the Flood Plain Management Services program, an increase of $7,050,000 from the FY 1995 allocation.

This program continues to be one of the most important non-project services that the Corps provides for Federally recognized Indian Tribes, states, and local Governments. By working together with state, local, and tribal land use decision makers, we are able to alert them to various flood hazards, promote prudent use of the flood plains and help mitigate future losses to life and property. As documented in the report of the Floodplain Management Review Committee on the 1993 Midwest floods, the active involvement of land use decision maker is the key to sound flood plain management in the United States.

The 1993 Midwest Floods and the 1994 floods in Georgia, Florida, and Texas have raised public awareness and increased the demand for information and assistance for mitigating flood losses. We are providing a higher level of flood plain management services to a greater number of state, regional, local governments, Indian Tribes, and other non-Federal public agencies which, in turn, invest their own funds to avoid flood hazards and make good use of the flood plains. This not only mitigates future losses to life and property abut also reduces the need for costly Federal flood control works as well as the demand for other Federal, state, and local services such as providing disaster assistance before, during, and after floods.

Under this program, we also participate with the Federal Emergency Management Agency, the National Weather Service, and local governments in conducting critical pre-disaster hurricane evacuation and preparedness studies for mobilizing local community responsiveness to natural disasters in high hazard coastal areas of states and counties along the Atlantic Ocean and the Gulf of Mexico.

Coastal Field Data Collection. The FY 1996 request for this activity is $4.0 million. Our coastal engineering, data collection mission includes development and construction of coastal and lake flood control and shore protection projects as well as operation and maintenance of coastal and lake navigation projects. To better perform this mission, the Corps acquires and assembles information on severe storm and hurricane effects, and high quality long-term data on: wind and wave climatology; tidal and longshore currents and water levels; erosion and accretion rates, and their manifestation as variations and trends in shoreline and beach entrance channel configurations. The needed data are generally not available, or are unreliable and of poor quality, or are statistically inadequate because they are too sparsely distributed with respect to time and place.

Ideally, the requisite records would already be at hand at each project site. Such intensive coverage is not practical due to the prohibitive cost and the lead time required. Through the Coastal Field Data Collection Program the Corps gathers and analyzes data on a regional basis and statistically enhances and extends this data base so that it can be used for individual studies, projects, and other activities.

The data developed by this program have considerable applicability for interested Federal, state, and local agencies, as well as the academic and private sectors.

GEOGRAPHIC INFORMATION SYSTEMS (GIS) RESEARCH

The amount of $500,000 is requested for FY 1996 for the first year of a proposed six-year, $7 million GIS Research initiative. Geographic Information Systems, which store and analyze geographic data, are an increasingly important Water Resources Management tool. This research will focus primarily on developmental work necessary for commercial GIS software and hardware to be effectively applied to improve Civil Works mission performance and reduce project and program management costs. This new technology will be integrated with existing Corps data to improve efforts such as ground water contamination models, flood maps, emergency management, natural resource management, and to enhance our efforts to interchange geographic with other organizations.

CHARACTERIZATION AND RESTORATION OF WETLANDS RESEARCH PROGRAM

This is a refocused effort that had previously been funded under O&M. The FY 1996 funding request is $2 million out of an estimated six-year program cost of $20 million. The first year of this program will include research in two major areas: critical processes of wetlands to define the ecological function and value of wetland ecosystems and their surrounding landscapes and to integrate this information into an interdisciplinary ecosystem/watershed analysis framework; wetlands restoration and establishment, to develop, evaluate and field test new and innovative technologies and engineering approaches for wetlands restoration and establishment and to develop widely applicable engineering design criteria for wetland restoration and establishment. The results of this research will be widely applicable to the regulatory program, in development and maintenance of Federal water resources projects and in implementing new cost-sharing wetlands and other aquatic habitat creation project authorities.

RESEARCH AND DEVELOPMENT

The FY 1996 request for general Research and Development (R&D) under General Investigations is $25 million, which is a decrease of $400 thousand compared to the FY 1995 allocation. This program supports the R&D needs of the full range of technical requirements and responsibilities within the Civil Works program from basic soils engineering and natural resource management to navigation ice reservoir management.

This is the Corps' keystone program for providing advances, improvements, and efficiencies for the Corps Civil Works mission. It supports the entire scope of the mission from planning and design to construction, operation and maintenance. This program continues to provide practical end products and a high return on investments for the Corps and the taxpayer. The following are some examples of recent benefits provided by this program:

* A fundamental advance was achieved in soil mechanics theory which has significantly improved the reliability of existing analytical tools to analyze mass soil deformate problems such as earthquake-induced soil slope failures and levee failures. This technical advance is also expected to produce significant cost avoidance savings by minimizing future requirements for expensive field study requirements which have, heretofore, been necessary to conduct this analysis.

* Developed cost-effective procedures for significantly improving the durability of roller-compacted concrete which will permit its use in virtually any exposure.

* Documented an innovative methodology to predict winds in

coastal areas which will significantly benefit future engineering design studies.

* Developed technical guidelines on the coastal benefits of various mitigation measures in aquatic habitats including artificial reef development.

* Developed and field tested techniques for using the hydrogeomorphic classification system for wetlands.

* Developed procedures for effectively applying satellite data for measuring the characteristics of the snow pack for more timely and accurate predication of spring runoff.

Risk Analysis for Water Resources Investment Research Program. As a part of the basic research and development program, $1.5 million is requested in FY 1996 to continue the Risk Analysis for Water Resources Investments Research Program that was initiated in FY 1992. The objective of the program is to develop improved techniques for decision making in the planning, engineering, operation and management of the Federal water resources infrastructure by the Corps. Recent accomplishments of this Research and Development initiative include; development of procedures for analyzing and prioritizing major rehabilitation of existing projects; incorporating risks, engineering reliability, economic and environmental consideration; prototype computer models for combining hydrology, hydraulic, geotechnical and economic uncertainties of flood damage reduction projects; and development of an analysis framework for evaluating the risk-cost tradeoffs and economic impacts for maintenance dredging. These procedures will allow the Corps to more efficiently manage major rehabilitation and enhance the Corps' ability to cost effectively operate and maintain our water resources projects. The methods and procedures developed will provide the Corps with tools to improve decision making and better inform our cost sharing partners and the public on the performance and cost of water resources projects.

Construction Productivity Advancement Research. Twelve additional Construction Productivity Advancement Research (CPAR) projects were selected last year, bringing the total number of projects to 64. These recently initiated projects reflect a wide range of Civil Works construction interests, with expected technologies produced for recycling construction materials, for cost-effective environmental compliance for construction project work sites, and for improved surveying systems for navigation dredging.

To date, over $60 million has been committed to the CPAR program by the construction industry and the Corps, with the industry providing 65 percent of the funds. CPAR products now being marketed to the U.S. construction industry include more durable and longer lived joint sealants for pavements, high performance blended cements, a system that will determine the quality of freshly-placed concrete in hours versus days, and plastic fibers for stabilizing high plasticity clays in roadway and levee construction. Interim products include improved guidance for selecting and using microtunneling equipment for trenchless construction and nondestructive testing methods for building structural components. Projects nearing completion will provide an advanced process for forming underground cutoff walls, a light weight, high strength concrete block, and concrete additives which will permit satisfactory concrete placement at temperatures down to 20 degrees Fahrenheit. In FY 1996, we are requesting $6 million to continue to fund new construction technology development under CPAR.

Economic Impacts of Global Warming. The amount of $150,000 is requested in FY 1996 to continue the Economic Impacts of Global Warming Research Program. This program is responding to the initiative on global warming expressed through the Intergovernmental Panel on Climate Change (IPCC) and the Federal Coordinating Council for Science, Engineering, and Technology in the Executive Office. The purpose of the program is to develop predictive models and evaluation techniques which would enable the Corps to assess the economic impacts of global warming and which would lead to cost effective economically justified adaptation and response strategies under conditions of climate uncertainty.

Evaluation of Environmental Investments Research. The amount of $2.4 million is requested in FY 1996 to complete a three year, $6 million Evaluation of Environmental Investments Research Program. This program is designed to develop an evaluation framework measurement technique that can be used to formulate and prioritize alternative environmental investment projects and programs. The research program includes involvement and input from Federal and State agencies, academia, and environmental and conservation groups. Products of this program will enable the Corps to identify the most cost effective approach for accomplishing environmental objectives and to effectively allocate limited resources among alternative environmental investment decisions.

Earthquake Engineering Research. Prior to FY 1994 when this program was initiated, there was no existing national program to develop seismic safety evaluation criteria for our critical Civil Works structures. Present methods are inadequate, and are compensated for by conservative practice. This may be leading us to expensive remediation actions when they might not always be needed. But, since human life is involved, we cannot take the risk. Improved engineering predictive tools are needed to reduce the need for conservatism, improve public safety, and make more well-informed expenditure decisions related to seismic safety.

The FY 1996 request for $2.5 million will be used to continue the Earthquake Engineering Research Program. The program is structured to:

o provide practical, effective seismic design tools where they are now missing.

o reduce the uncertainty in our seismic safety assessments and avoid costly defensive design.

o reduce the risk of catastrophic failure of Corps infrastructure, primarily dams.

o save money on new construction and remediation efforts.

This program provides a focused research and development effort to advance state-of-the-art knowledge and Corps capabilities in earthquake hazard assessment, seismic design, and remediation of Corps facilities.

Past Corps earthquake research has saved $13 million in construction costs on two projects alone in 1990-1991; seismic remediation of Sardis Dam in Mississippi and Folsom Dam in California. An example of new construction is the $1 billion Olmsted Locks and Dam Project on the Ohio River which would significantly benefit from better definition of earthquake ground motions and more reliable procedures for seismic design of pile foundations. The potential savings from a single major project would support this program for several years.

In spite of major advances over the last 25 years, unknowns still exist in our knowledge in the areas of earthquake hazard predictions, site characterization for seismically sensitive parameters, constitutive behavior and materials properties of rock, soils and composite materials under seismic loads, and the stress and deformation response of sites and facilities to seismic loading. This is a coordinated research program which will produce design tools and criteria which incorporate innovative measures for assuring the seismic safety of Corps facilities. Activities under this program are coordinated with other Federal, state, and private entities involved in earthquake engineering research, to assure that efforts are not duplicated.

Zebra Mussel Control Research Program. Funds in the amount of $2 million are being requested to continue the Zebra Mussel Control Research Program. This is an extremely high priority program to assist in developing environmentally sound methods of prevention and control of zebra mussels in and around public facilities.

Accomplishments for FY 1995 include:

* Continuing cooperation work with the US. Geological Survey to track densities of Zebra Mussels at stream gaging stations.

* Developed methods to assess rate of corrosion of metal structures due to Zebra Mussel attachments.

* Demonstrated the effectiveness of forced air buffer systems for infestation control on large submerged structures such as bulkheads and lock gates.

* Developed a list of metal paints for prevention of infestations on trash racks and boats.

* Published information on temperatures and desiccation tolerances of Zebra Mussels for non-chemical methods of control.

* Conducted numerous national and regional technology transfer meetings involving federal, state, private industry, and municipalities.

* Completed and distributed 59 technical notes on research and development end-products to more than 800 subscribers and participated in a PBS video documentary on Zebra Mussel infestation of US waters and federal research and development programs to address this problem.

TOTAL CIVIL WORKS RESEARCH AND DEVELOPMENT FUNDING

The conference report, report number 102-177, accompanying the FY 1992 Energy and Water Development Appropriation Act stated the conferees concern with the trend of spreading research related programs throughout several appropriation accounts in the Civil Works budget request, and directed the Corps of Engineers to work with the committees to address this issue. In response to this interest by the committees the following table has been developed to provide a consolidated display of all Civil Works research and development activities for which there is a request for funding in the FY 1996 budget:

ACCOUNT AND ACTIVITY	DOLLAR AMOUNT
GENERAL INVESTIGATIONS	
General Research and Development	25,000,000
Construction Productivity Advancement Research	6,000,000
Economic Impacts of Global Warming	150,000
Evaluation of Environmental Investments	2,424,000
Earthquake Engineering	2,500,000
Zebra Mussel Control Research Program	2,000,000
GIS Research	500,000
Characterization & Restoration of Wetlands	2,000,000
CONSTRUCTION, GENERAL	
Aquatic Plant Control	0
OPERATION AND MAINTENANCE, GENERAL	
Coastal Inlet Research	4,000,000
Repair, Evaluation, Maintenance, and Rehabilitation Research	6,000,000
River Confluence Ice Research	1,150,000
Real Time Water Control Research Program	1,000,000
Dredging Operations & Environmental Research	3,000,000
GENERAL EXPENSES	
Coastal Engineering Research Board	325,000
OIL SPILL RESEARCH	850,000
GRAND TOTAL	$56,899,000

ACTIVITIES UNDER THE CONSTRUCTION, GENERAL APPROPRIATION

CONTINUING AUTHORITIES

The request for the six Continuing Authorities funded under Construction, General is $41 million, an increase of $13.9 million from the FY 1995 appropriation. The request covers funding of planning, design, and construction to provide solutions to flood control and emergency streambank erosion problems under the Section 205 and Section 14 programs, navigation problems under the Section 107 program, shoreline damage problems under the Section 103 and Section 111 programs, and clearing and snagging problems under the Section 208 program. The Continuing Authorities will be terminated in FY 1997. Any Continuing Authorities project which has not been approved for construction by the end of FY 1996 will not be funded for construction. All on-going projects will be completed with FY 1996 or prior year funds.

INLAND WATERWAYS USERS BOARD

Section 302 of the Water Resources Development Act of 1986 created an eleven-member advisory board of inland waterway users and shippers to make recommendations to the Secretary of the Army and the Congress regarding construction and rehabilitation priorities and spending levels for commercial waterway improvements. The Board members were initially appointed in late Spring of 1987. The Board has held nineteen meetings since it was created.

The Board's recommendations are a valuable addition to our program and budget development process. We appreciate the contribution of the Board's chairman and its members to the efficient management and modernization of our inland waterways. We believe the Board provides an important advisory function to both the Secretary of the Army and the Congress. The FY 1996 request for this activity is $225,000.

PROJECT MODIFICATIONS FOR IMPROVEMENT OF THE ENVIRONMENT

Funds are requested for Project Modifications for Improvement of the Environment, authorized by Section 1135 of the Water Resources Development Act of 1986, as amended. Under Section 1135, we are increasing our efforts to identify opportunities for structural or operational modifications to Corps water resources projects in the interest of improving the quality of the environment, identify local sponsors willing to bear 25 percent of the cost of those modifications, and carry out cost shared modifications that are found to be feasible and consistent with authorized project purposes. The request for FY 1996 is $24.3 million which, together with the funds specifically requested for the Yolo Basin Wetlands, CA ($0.7 million), make a total of $25 million requested under Section 1135 of the Water Resources Development Act as amended. The appropriation for FY 1995 was $8 million. In FY 1994, 10 projects were approved for construction including one project in Iowa initiated in response to the Midwest Floods of 1993. Procedural changes in the implementation of the program are being developed which will facilitate execution and create a more robust program with an increased funding requirement. Approved projects contribute to achievement of national program goals such as those contained in the North American Water fowl Management Plan and Coastal America Program, as well as to regional needs such as elimination of barriers to fish passage in some streams.

WETLANDS AND OTHER AQUATIC HABITAT CREATION

The FY 1996 request includes funds in the amount of $15 million, which is an increase of $12.5 million from the FY 1995 appropriation, to be used to provide for the beneficial use of dredged material in protecting, creating, and restoring aquatic habitats and wetlands in cooperation with non-Federal interests. This funding will support the objectives of the coastal America Partnership and the North American Waterfowl Management Plan by providing the framework for Corps participation in these efforts. Funds will also be available for cost shared projects for restoration of coastal fisheries habitat in support of the cooperative agreement between the Department of the Army and the National Marine Fisheries Service. The non-Federal share of these projects is 25 percent of the costs in excess of necessary dredging and 100 percent of the operation, maintenance, repair, replacement and rehabilitation costs. Several studies have been initiated under the interim guidance and with issuance of final procedures and increased awareness of the program's potential we expect an increased demand for funding.

EMPLOYEES' COMPENSATION

The request includes $18,984,000, an increase of $64,000 from the FY 1995 appropriation, for transfer to the Department of Labor to replenish the Employees' Compensation Fund, for costs charged to that Fund during the period July 1, 1993 through June 30, 1994. The transfer is for payment of benefits and claims on account of injury or death of Corps of Engineers Civil Works employees.

DAM SAFETY ASSURANCE

Funds in the amount of $2.0 million are recommended for the Dam Safety Assurance Program for new starts that may be approved during FY 1995 and FY 1996 as the result of studies now underway. This would provide for the modification of completed Corps of Engineers dam projects that have a potential for failure from the occurrence of extremely large floods and seismic events.

ACTIVITIES UNDER THE OPERATION AND MAINTENANCE, GENERAL APPROPRIATION

Seven new initiatives are proposed under the Operations and Maintenance, General, appropriation account. They are: (1) Dredging Operations and Environmental Research (DOER); (2) Hazardous Waste Site Restoration; (3) Natural Resources Inventory (NRI); (4) Performance Measurements for O&M; (5) Pollution Prevention Program; (6) Reinvested User Fees for Recreation Improvement; and, (7) Wetlands Action Plan Implementation.

COASTAL INLET RESEARCH PROGRAM

The FY 1996 budget includes $4.0 million to fund the second year of a Coastal Inlet Research Program. This research program will require 6 years to complete, and will cost a total of $20 million.

Coastal inlets and adjacent shores are the most complex natural hydraulic systems with which the Corps must work. The largest portion of the coastal operation and maintenance budget is spent dredging the channels or repairing structures such as jetties and training dikes associated with over 100 coastal inlets around U. S. coastlines. Because these systems are so complicated, practical solutions for determining orientation, length, width, and depth of navigation channels to afford safe navigation; optimal length, size and orientation of structures such as jetties; design of sand bypassing systems; and for minimizing the impact of Corps projects on adjacent shorelines tends to be conservative.

Significant advances in engineering solutions are unlikely until the fundamental knowledge and predictability of inlet processes are improved. This Coastal Inlet Research Program has been devised to collect field and laboratory data and perform theoretical and numerical studies required to improve Corps inlet design, beach response, and engineering analysis procedures so that innovative, cost effective, and environmentally acceptable solutions for practical Corps problems in inlet systems can be devised.

A primary FY 1995 accomplishment in this program was the development of a conceptual model that describes how sandy sediments move into and around inlets. This model is essential to accurately predict how shorelines change with time around inlets.

DREDGING OPERATIONS TECHNICAL SUPPORT (DOTS)

The Dredging Operations Technical Support (DOTS) program was founded in 1978 as a technology transfer and technical assistance program to facilitate environmental compliance and technical transfer at Corps navigation dredging projects. The DOTS Program provides direct environmental and engineering technical support to all Corps elements in support of maintenance projects; training of staff on the latest environmental and engineering techniques associated with dredging and dredged material disposal; short-term work efforts to address generic Corps-wide technical dredging and dredged material disposal problems; technology transfer of new and emerging techniques in assessment and management of dredged material.

Ongoing dredged material management tasks include efforts to assist in using the implementation manuals for the Clean Water Act and the Marine Protection, Research, and Sanctuaries Act. Guidance is being developed for the application of techniques and methodologies for the management of contaminated dredged material to include risk management, equipment selection, confined disposal facility management, and quality assurance/quality control guidance. Since a training program began in 1991, over 1,500 personnel from Federal, state and local agencies have been trained at seminars on the latest techniques in regulating, testing, and managing dredged materials. Publication and distribution of nearly 25,000 manuals, bulletins, and technical reports have been accomplished under DOTS. A joint Corps/Environmental Protection Agency task force was formed under this program to develop analytical procedures and a decision making framework for dioxin contaminated dredged material. That program is supporting the Corps navigation dredging mission at Georgetown Harbor, SC; Brunswick Harbor, GA; New York Harbor, NY; Grays Harbor, WA; Mobile Harbor, AL; and Boston Harbor, MA.

This is a continuing program with an estimated cost of $3.35 million annually.

DREDGING OPERATIONS AND ENVIRONMENTAL RESEARCH (DOER) PROGRAM

The amount of $3 million is requested in FY 1996 to initiate a proposed eight year, $40 million DOER Program. Balancing environmental protection while economically maintaining a viable navigation system is a major challenge facing the Corps of Engineers. Research is proposed to address operations and environmental demands in these major areas: contaminated sediment characterization and management; instrumentation for monitoring and site management; on-shore and off-shore placement of dredged material; environmental windows for dredging operations; innovative equipment and technologies demonstration; and, environmental risk management for dredging and disposal activities. Anticipated benefits include proper application of environmental windows, cost-effective identification and management of contaminated sediment, greater flexibility for dredging in sensitive ecological areas and expanded options for beneficial uses of dredged material.

MONITORING OF COMPLETED COASTAL PROJECTS

The request of $2.1 million for Monitoring of Completed Coastal Projects will provide for the ongoing program of monitoring critical engineering parameters of selected coastal projects to determine and analyze project-induced changes in topography, currents, tidal stages, and other coastal processes phenomena. The data collected and analyzed are used to evaluate project performance in relation to design, operation, and maintenance expectations and to develop improved designs for coastal projects and desirable modifications in their operation and maintenance modes. Studies are performed at the local level to evaluate project performance and coastal processes response in relation to the particular needs of each project. Additionally, the information is collected and analyzed from a Corps-wide perspective to document successes and the sometimes costly lessons learned and to transfer the information into guidance for field and management staff. The information developed by this program is made available to other Federal, state, and local agencies concerned with planning and regulating the conservation, development, and use of coastal resources.

SCANNING HYDROGRAPHIC OPERATIONAL AIRBORNE LIDAR SURVEY (SHOALS)

We are requesting $1.750 million to conclude a five-year, $12.3 million program to develop, demonstrate, and implement an airborne laser system capable of performing rapid, cost-effective reconnaissance and condition surveys in navigation channels and coastal areas. This will result in substantial savings over the present water-based survey technology both in terms of reduced survey costs and in accuracy of data for determining maintenance requirements. Currently, response to survey requirements is constrained significantly by the present combination of water-based survey technology and diminishing fiscal and manpower resources. This system addresses such constraints directly by providing orders-of-magnitude increases in survey speed and coverage and significantly higher survey data densities for comparable levels of resources expenditure. The program is a joint effort between the United States and Canadian governments, with Canada providing approximately half of system design and construction costs.

In FY 1995 and 1996, the system will undergo intensive demonstration and characterization on typical Corps projects around the United States. Other federal agencies, Navy and National Oceanic and Atmospheric Administration, which have an interest in the system are providing operational support to conduct the demonstrations.

REPAIR, EVALUATION, MAINTENANCE, AND REHABILITATION (REMR-II)

This is the fifth year of a seven-year, $35 million R&D initiative to address field-identified problems where solutions have potential for large savings and widespread applications. The overall objective is to identify and develop effective and affordable technology for maintaining and extending the service life of Corps Civil Works projects.

The FY 1996 request includes $6 million for this program which encompasses a significant amount of field work and development of guidance on repairs using precast concrete; a numerical model for the evaluation and maintenance of high velocity channels; optimum maintenance, repair and rehabilitation solutions developed for cold weather operational problems at hydraulic structures; completions of the coastal structures acoustic rastor scanner and associated software for safe and cost-effective inspections of underwater structures; and final guidance developed on maintenance and removal of lead pigmented paints on hydraulic structures.

RIVER CONFLUENCE ICE RESEARCH

The amount of $1.15 million is requested to fund the third year of the 5-year, $4.5 million River Confluence Ice Program. Ice jams at river confluences are a major source of winter damage to the Corps, the navigation industry, and river communities. The aim of this program is to develop practical methods for use by Corps field operating activities to reduce the incidence or severity of ice jam induced problems. The recent performance of existing domestic and foreign ice-control structures has been documented with positive results. Additionally, promising experiments have been conducted on selective localized ice-weakening using environmentally benign methodologies. Products of the program will include models to predict ice conditions and potential for jamming at river confluences, evaluation of the effects of Corps project operations and channel modifications on ice jam formation, and methods to control the breakup and release of river ice. The program is expected to result in substantial savings by reducing the Corps operation and maintenance costs, in reduction of shipping delays and damage to vessels, and through reduction of flooding and direct ice damage to riverain property and communities.

ENVIRONMENTAL REVIEW GUIDE FOR OPERATIONS (ERGO)

The Environmental Review Guide for Operations assessment process is needed to provide leadership through continuing compliance with environmental laws.

Trained managers, with technical assistance from Corps District elements, state authorities or private sector contractors, are using the guide to determine if their operations are being conducted in compliance with environmental laws and regulations. Following reviews based on this guide, identified deficiencies can be prioritized and placed in budgets and work schedules. The first reviews were initiated in the first quarter of FY 1992, and assessments were completed at 25 percent of the Corps operated projects and facilities by the end of that fiscal year. The overall goal, to substantially complete environmental compliance assessment at all Corps projects and facilities by the end of FY 1994 was met. The FY 1995 allocation of $1.5 million provided for the initiation of Cycle II environmental compliance assessments of Corps projects and facilities using teams whose members are external to the project. The FY 1996 budget request is $2.0 million to continue the initial assessment process.

HAZARDOUS WASTE SITE RESTORATION INITIATIVE

This, also, is a new environmental initiative in FY 1996. Section 3016 of the Resource Conservation and Recovery Act requires all Federal Agencies to undertake a continuing program to compile, publish, and submit to the Environmental Protection Agency, and to some states, an inventory of each site which the Federal agency owns or operates or has owned or operated, at which hazardous waste is stored, treated, or disposed of at any time. There are, throughout the Corps, potential hazardous waste sites including former solid waste disposal sites which were improperly closed, landfills, or old farm and community dumps that were created prior to land acquisition by the Corps. Under this initiative, projects and facilities will undergo comprehensive surveys to locate and document potential problem sites. The identified sites will then be analyzed, and corrective actions for each will be formulated and prioritized so that this year's funding will go to the sites most in need and/or most likely to have significant undiscovered problems. Coupled with the ongoing environmental compliance assessment program at Corps projects and facilities, the $3.0 million requested for this year's restoration initiative will further strengthen environmental stewardship for the lands, projects, and facilities, under the aegis of the Corps.

NATIONAL DAM SAFETY PROGRAM

By Executive Order 12148 and Presidential Directive, the Federal Emergency Management Agency (FEMA) was designated as lead agency in efforts to enhance national dam safety. In 1979, FEMA established the Interagency Committee on Dam Safety (ICODS) consisting of nine Federal agencies having responsibilities for dam safety. The Corps is a member agency. The purpose of ICODS is to coordinate, promote, and enhance the Federal and state dam safety programs and develop consistency in technical practices and management policies. The Corps and FEMA signed a Memorandum of Understanding (MOU) in 1992 for the purpose of establishing responsibilities for management and administration assistance in the implementation of the National Dam Safety Program. The MOU was entered into pursuant to the Economy in Government Act, 31 U.S.C. 1535. A principal objective is to provide for allocation of Corps funding to FEMA on a programmatic rather than project-specific basis to enable development of a more systematic approach to effecting national dam safety. FEMA will provide support in development of federal guidelines for dam safety, promotion of public awareness programs, publications, training materials, and workshops.

The FY 1996 budget includes $20,000 to continue this participation.

CULTURAL RESOURCES (NAGPRA/CURATION)

The Native American Graves Protection and Repatriation Act of 1990 addresses the recovery, treatment, and repatriation of Native American and Native Hawaiian cultural items by Federal agencies and museums. Cultural items are defined as human remains and associated and disassociated items having to do with funerals and/or burials, sacred objects, and objects of cultural patrimony. The Department of the Interior is in the process of developing a set of Federal regulations for compliance with the provisions of this Act. In the meantime, the Corps is requesting funds because of the immediate impacts and reporting requirements it imposes. In FY 1995 Corps field offices continued an inventory of those cultural items which were started in FY 1994. Information will be made available to interested individuals and groups through notices in the Federal Register and Corps field offices will engage in formal consultation with tribes and organizations in order to repatriate cultural objects for which there are claims. In addition, the Corps has established the St. Louis District as a center of expertise for the curation of a large volume of cultural resource materials collected from its flood control projects over the years. The FY 1996 budget request is $4 million to continue this program.

NATURAL RESOURCES TECHNICAL SUPPORT (NRTS)

Our request of $1.8 million is to provide immediate, short-term technical assistance to the Corps field natural resource managers. This is an ongoing program that provides direct assistance in support of the field's efforts to solve specific problems in order to keep completed projects operating as efficiently as possible at the least cost to the taxpayer. The Corps Waterways Experiment Station receives approximately 50 requests a year for assistance to solve problems confronting Corps projects. Technology transfer through educational workshops for staff, as well as publication of quarterly technical bulletins is an important part of the program as well as technology maintenance activities including modifications to microcomputer program systems used at project and district offices to manage their Natural Resource Management Program. The program provides direct support to the field park rangers and resource managers in the central procurement of uniforms, development, printing, and distribution of water safety materials; and various similar activities.

NATURAL RESOURCES INVENTORY

To assure long term resources use and resource protection at Corps projects, an inventory of natural resources will be conducted, including the identification of priorities and schedules. Inventory information, obtained by districts, will be used to conduct analysis for natural resources management improvement and to develop interim guidance, culminating in an Engineering Regulation. Natural resources management goals and objectives will be incorporated into resources planning and procedures. Operation management plans will be completed using natural resources inventories to better prioritize management strategies. The estimated two-year program cost is $3 million including the $500,000 requested for FY 1996.

PEER REVIEW PROGRAM

In FY 1994 the Corps instituted a program to provide a systematic procedure for a broad-scope evaluation of operations, construction and readiness programs by visiting teams of peer professionals. The objective is to achieve maximum management performance at Civil Works projects and activities throughout the Corps by taking advantage of the collective expertise of the Corps professional staff. The FY 1996 request includes $400,000 which is the estimated annual cost of this continuing program.

POLLUTION PREVENTION PROGRAM

Executive Order 12856, Federal Compliance with Right-to-know Laws and Pollution Prevention Requirements, makes it clear that Federal facilities are to be proactively managed and will be held to the same high standards that are required of private industry. The pollution prevention requirements of the Executive Order, Section 4-404 of which states that ... "Federal agencies shall place high priority on obtaining funding and resources needed for implementing all aspects of this order, by identifying, requesting and allocating funds through line-item or direct funding requests" ... The requested funds will be applied to pollution prevention assessments and prevention plans for Corps operated projects and facilities, to identify adverse impacts and cost effective alternatives, identify resource needs and to develop implementable schedules. Funds will be used to execute pollution prevention plan recommendations and will also be used to identify non-polluting substitute products with broad applicability. Our efforts focus on pollution prevention through source reduction as opposed to end-of-pipe treatment. The Department of Defense, in its Pollution Prevention Strategy Statement, noted that up front funding for pollution prevention saves operation costs through efficient use of resources and reducing compliance costs. The Corps Pollution Prevention Program will reduce, at the source, the quantity of toxic pollutants entering any wastestream, and will provide mechanisms for recycling and/or storage, treatment, or disposal of remaining wastes in a manner protective of public health and the environment. FY 1996 funding in the amount of $4 million will give us the start we need in a three year, $13 million program to meet the Executive Order and DOD requirements to reduce, by 50 percent, total releases of toxic chemicals and other pollutants by 31 December 1999.

REAL TIME WATER CONTROL RESEARCH PROGRAM

The purpose of the real-time water control research program is to develop new and improved techniques for the operation of Corps reservoirs to better meet their authorized purposes. The request for FY 1996 is $1 million and the estimated six-year program cost is $5.2 million. This program would allow the Corps to take advantage of existing computer system technology for data acquisition, communication and graphical displays. It will update existing techniques and develop new mathematical flow and stage forecasting modeling capabilities for water control management. Key areas of research and development include the acquisition, communication, processing, and presentation of information about controlled river and reservoir systems. Examples of such information include the rates, amounts and areal distribution of precipitation over river basins, the rates and volumes of runoff from tributary and main stem rivers, the status of reservoir storage and the flow from dams. The result will be an integrated support system with enhanced abilities to make efficient, accurate, and timely water control decisions and to allow better dissemination of required information to cooperating agencies and the public. In FY 1994 a new distributed runoff forecast model was developed to take advantage of spatially distributed precipitation data from new weather radars currently being deployed. New spatial visualization software was developed and is being used at several Corps sites. Demonstrations of data exchange technologies and demonstrations of integrating a Geographic Information System with river stage forecasting software were also provided in FY 1994. Research continues in these areas in FY 1995 along with a pilot implementation of relational data base technology.

REINVESTED USER FEES FOR RECREATION IMPROVEMENTS

The Corps collects recreation user fees for public use of certain developed recreation sites and facilities constructed at Federal expense at Corps projects. User fees have been charged for overnight camping, reservation of specialized facilities, and conduct of special events, pursuant to Land and Water Conservation Fund Act authority since the mid-70's. Fees for the use of day use facilities were instituted in 1994, pursuant to authority provided in the Omnibus Budget Reconciliation Act of 1993. The user fees collected reduce the cost to the Federal Treasury of operating the

Corps recreation program by assuring recreation users pay a greater share of the costs for maintaining the facilities they enjoy. Five million dollars in user fees are requested for reinvestment in improvements to recreation sites and facilities, in order to improve the quality of recreation experience available to the public, while increasing the fee collection potential of these recreation sites. These funds will be expended in conjunction with the challenge cost share, volunteers, cooperating associations and other resource maximizing programs, as appropriate, to achieve optimum benefit for the investment.

WATER OPERATIONS TECHNICAL SUPPORT (WOTS)

Water Operations Technical Support is a continuing program to provide direct technical assistance to field offices in the application of state of the art technology to project specific water quality issues. Addressing water quality environmental issues throughout the Corps can best be accomplished through a comprehensive and interdisciplinary approach from a centralized program to maximize cost effectiveness and ensure the broadest dissemination of information and timely implementation of new technology. The WOTS program includes technical assistance, technology transfer, technology maintenance, and technology demonstrations. Currently, demonstrations are being conducted at five activities including East Sidney Lake, NY and Eau Galle Reservoir, WI, as well as National water quality assessments being coordinated with the USGS to evaluate 248 Corps projects. This is a continuing program with an estimated annual cost of $1.6 million.

WETLANDS ACTION PLAN IMPLEMENTATION

Section 307(a) of the Water Resources Development Act of 1990 (P.L. 101-640) established that wetland goals are to be part of the Corps water resources development program and directed the development of an action plan to achieve those goals. The Wetland Action Plan identifies operations actions which support and enhance stewardship of wetlands on Corps lands through identification, management and restoration. An inventory of wetlands will be conducted, including the identification of priorities and schedules. The inventory information would be used to conduct analysis for wetland management improvement and to develop interim guidance, culminating in an Engineer Regulation. Wetland goals and management objectives will be incorporated into natural resources planning and procedures. We are requesting $500,000 to initiate this program in FY 1996. The total estimated four year program cost is $2.7 million.

PROTECTION OF NAVIGATION

The budget request includes four continuing programs under the Protection of Navigation category. The first is for work pursuant to the authority provided in Section 3 of the 1945 River and Harbor Act to protect, clear and straighten channels in navigable waters for small projects not specifically authorized by Congress ($50,000). The second program is for removal of sunken vessels and other obstructions ($1,000,000). The third program is for the collection of waterborne commerce statistics pertaining to rivers, harbors, and waterways, and publication of such data($4,200,000). The fourth program is the Dredging data and Lock Performance Monitoring System ($480,000) which provides data for efficient management of navigation projects consistent with Federal laws regarding execution of our dredging program. The program also includes a continuing evaluation of lock condition and performance measures throughout the navigation system to facilitate traffic control and critical management decisions.

NATIONAL EMERGENCY PREPAREDNESS PROGRAM

Preparedness for response to national emergencies, including catastrophic disasters, is a fundamental Government obligation. From support to national mobilization during World War II through response to Hurricanes Andrew and Iniki, the Northridge Earthquake and the 1993 Midwest Floods, the importance of the Corps' role associated with this responsibility has been amply demonstrated.

The National Emergency Preparedness Program (NEPP) is the civil component of Corps National Security Emergency Program and a vital element of Corps readiness. It supports initiatives required by Executive Order 12656 "Assignment of Emergency Responsibilities" and National Security Directive 66. The program provides the capability to rapidly and effectively respond to a broad spectrum of major catastrophic natural and manmade disasters, having national implications. The mechanism for the implementation of this response is the Federal Response Plan (PL 93-88 as amended) or DOD Directive 3025.1 "Military Support to Civil Authorities". The NEPP and FC&CE programs are complementary. However, the NEPP supports planning and preparation for catastrophic disasters (natural and manmade)of proportions so great as to have severe National impact(s)and implications that extend far beyond those events for which the Corps routinely prepares and responds under the FC&CE program. Additionally, NEPP planning goes beyond disaster response to include planning for Continuity of Operations/Government, the Emergency Water Program and other national security activities. The high level and broad spectrum of preparation associated with the NEPP complements and builds upon FC&CE funded efforts.

A substantial portion of the NEPP funding pays for the salaries of the emergency planners who lead in the development of scenario specific NEPP plans and the functional personnel (e.g. engineering, contracting etc.) who provide supporting data and plans. The planners also coordinate and conduct exercises with Federal, state and local governments and, during emergencies, serve as part of the emergency response teams which coordinate the Corps response. These personnel and their activities enable the Corps to respond more effectively to disasters such as Hurricanes Andrew and Iniki and the Northridge Earthquake. Absent the readiness funding that supports these activities, the Corps response to these events would not have been as capable or as timely. The $7,000,000 for the NEPP included in the FY 96 request will enable us to maintain our current levels of preparedness while focusing on new readiness issues affecting the Nation.

PERFORMANCE MEASUREMENT FOR OPERATIONS AND MAINTENANCE

Funds were appropriated in FY 1995 to conclude implementation of program improvement measures that were identified in an extensive review of the Corps Operation and Maintenance Program. Results of a comprehensive study entitled "Policy and Procedures Options for Project Operations and Maintenance" was previously furnished to this Committee on October 8, 1993 by the Acting Assistant Secretary of The Army (Civil Works). The objective of the improvement measures is to assure that the Federal funds appropriated to operate and maintain Corps projects are used to provide justified levels of service in the least cost manner.

The plan of improvement measures will be in place by the beginning of FY 1996. The measures being implemented are responsive to and consistent with the aims of the National Performance Review (NPR). These measures were developed by peers from all levels of the organization and ratified by program leaders. The commitment by people at all levels of the program has built a "capacity for change" that will foster continuous improvement to meet the challenges of workforce reduction, budget constraints, and the ever-changing focus of the organization. Implementation of measures will shift the organization from a hierarchically controlled (stovepipe) bureaucracy to a consumer empowered entity.

Specifically, the organizational structure has been standardized to have an Operations Project Manager, who is responsible for a project or projects, report directly to the Chief of Operations, who is responsible for the program. Implementation plans for this structure, which will decentralize decision making and focus accountability, indicates an essential Corpswide workforce reduction of 175 full-time equivalents (FTE's), a savings of about 6 million dollars. It is also expected to eliminate at least one management layer at each district, and double the employee to supervisor ratio. More importantly, a structure has been put into place that will facilitate a rational process in future workforce reductions.

The FY 1996 O&M budget was developed using a process which was an outgrowth of the improvement initiative. A review of the 1996 budget development indicates a near unanimous agreement from all Corps offices that the process has been streamlined, simplified and clarified.

Regulations that contain O&M policies and standardized operating procedures have been reviewed and revised to assure that the current and necessary policies and procedures are reflected. Consistent with the objectives of Executive Order 12861, "Elimination of One-half of Executive Branch Internal Regulation," the current number of 93 regulations have been reduced to seven through rescission and consolidation. The number of pages in regulations have been reduced from 1636 to 284. The reduction was achieved by starting policies and procedures to indicate "what" is to be accomplished and leave "how to" up to the initiative of field offices and project staffs.

A performance measurement system is being installed that will facilitate assessment by the organization at all levels of how various measures contribute to improvement and how productivity can be increased. These measures, to be in place by FY 1996, will focus on "results" and "outcomes." This system will link national program performance indicators to the corporate goals and objectives of the Government Performance and Results Act of 1993 (GPRA). In this regard, the O&M Program Plan of Improvement is a pilot project under the auspices of GPRA.

A critical factor in achieving the overall objective of the O&M plan of Improvement and supporting the intent of NPR and GPRA is the linking and standardization of existing databases. Performance Measurement and Project Execution data must be easily and readily accessible at all levels of the organization, particularly to the Operations Project Manager. The FY 1996 budget request of $3.5 million will initiate the interfacing and linking of present data systems with commercial off-set software to provide all levels of the organization, including the Operations Project Manager, with a single point of access for performance measurement, management and execution data.

CIVIL WORKS ENERGY DATA SYSTEM

The Civil Works Energy Data System is a program which was established by the Corps to comply with provisions of the Federal Energy Management Improvement Act. The purpose of this program is to minimize energy consumption and costs by tracking energy deliveries, inventories, losses, sources, and users. This is a five year program with an estimated total cost of $300,000 and an annual cost of $60,000 as included in the request. Initiated in FY 1995, the program provides technical assistance to the field in support of an energy data microcomputer based system and training for field personnel to collect and process energy data.

EARTHQUAKE HAZARDS PROGRAM FOR BUILDINGS AND LIFELINES

The Earthquake Hazards Program for Buildings and Lifelines program was established in response to Public Law 101-614, the National Earthquake Hazards Reduction Program Re-authorization Act. Its purpose is to establish a systematic approach to reducing loss of life, injuries, and economic costs resulting from earthquakes at

Corps public works and utility systems including electrical power, transportation, water supply, sewers, telecommunications, and gas and liquid fuels. The program was first budgeted in FY 1995 for the single source management of funds for preparation of guidance and training for district personnel to conduct seismic evaluations, to initiate the evaluations, and to provide assistance in carrying out the program and reviewing the results of the evaluations. The centrally funded effort is scheduled for completion in FY 1999 at a total estimated cost of $8.5 million. The FY 1996 budget request is $1.25 million.

MISSISSIPPI RIVER BASIN MAINSTREAM MODEL DEVELOPMENT

The Mississippi River Basin drains approximately 41 percent of the continental United States. Although hydrologic model studies contributed to the design of the various flood control structures on the tributaries of the Mississippi River, a comprehensive model is needed to operate the mainstem as a system under conditions such as the Great Flood of 1993. The Mississippi Basin Model (MBM) served this purpose until its recent decommission due to advanced age and cost of maintenance. As a logical substitution for the MBM, a mainstream mathematical model must be developed. The estimated total cost for its development is estimated at $2.375 million. The budget request includes $1 million to complete the model development in FY 1996.

RELIABILITY MODELS FOR MAJOR REHABILITATION

The budget request also includes $675,000 for the Waterways Experiment Station to support districts with a Reliability Models Program for Major Rehabilitation. Some examples include reliability models needed for determining sliding stability parameters for difficult foundation conditions, conducting stress analyses of hydropower turbine blades and shafts, and evaluation of structural integrity based on recent flood data. This is a continuing program with an estimated average annual cost of $675,000.

ACTIVITIES UNDER THE REGULATORY PROGRAM APPROPRIATION

FY 1996 regulatory budget request is $112 million compared with the FY 1995 appropriation of $101 million. This increase is primarily required to implement an administrative appeals process whereby the public can challenge regulatory decisions without the need for litigation. This is the principal aspect of the President's August 1993 Wetlands Plan. Under the President's Plan, the Corps is working to make the regulatory process more fair and predictable as well as to improve wetlands protection.

We expect to have an appeals process regulation in place by early FY 1996. This is an important step in making the program more responsive to the public. It has a significant workload potential -- about 250 denied permits a year would be subject to appeal and they are generally for major, environmentally sensitive projects. Appeals would also be allowed for the 40,000 wetland jurisdiction determinations we make each year.

The budget increase will also allow progress toward meeting the President's goal of completing review of most permits within 90 days of the date of the public notice. We anticipate we will have implementing regulations in place by the beginning of FY 1996. We have already made some improvements in our performance over the last several years because of additional resources allocated to the Regulatory Program. Because of the need for government employees to make the regulatory decisions, the Corps performance on making decisions is directly related to funding levels.

We are currently working on an expansion of our nationwide permit program which will reduce regulatory burdens on the public. It will also help, to some extent, with increased workload resulting from the excavation rule which makes regulation of excavation activities consistent across the country. We expect to have revised nationwide permits in effect sometime in FY 1996.

Legislation is being proposed to allow an expansion of our regulatory fee system. Higher fees would be applied to commercial permits and fees would likely be assessed for jurisdiction determinations as well. If such fees are implemented in FY 1996 we expect to produce additional revenue of about $6 million that year and higher amounts in subsequent years. The fees would be used as an offset to the regulatory budget. Currently we collect less than half a million dollars annually in permit fees.

ACTIVITIES UNDER THE FLOOD CONTROL AND COASTAL EMERGENCIES APPROPRIATION

The FY 1996 request of $20 million for Flood Control and Coastal Emergencies provides for the basic requirements of this program. The Corps responsibility for emergency/disaster responses requires that a fully functional engineering/construction/emergency operations response capability be maintained. The level of funding is sufficient to ensure an engineering organization capable of responding to both natural and man-made disasters: hurricanes, floods, earthquakes, and any other natural disasters to include contaminated public water supplies. The basic level of funding budgeted for this program in FY 1996, as well as the workforce it supports, may be supplemented as necessary in the event of a major event requiring the Corps to respond.

Activities under this program include: review and updating of response plans to ensure viability; training personnel to ensure their capability to respond under adverse circumstances; procurement and pre-positioning of critical equipment and supplies which would likely not be available during the initial stages of a response; periodic exercises to test and evaluate plans, personnel and training; inspection of non-Federal flood control projects to ensure their viability to provide flood protection; laboratory support for field operations; and, the overall management of the response program to ensure a workable, coordinated effort is undertaken in a timely manner. In addition, work continues on comprehensive interagency response planning activities related to the Federal Emergency Management Agency's Federal Response Plan for providing public works and engineering support following catastrophic events such as Hurricane Andrew and the Northridge Earthquake. In support of FEMA's disaster response and recovery activities, Corps mission assignments have included: emergency debris removal; temporary housing; infrastructure restoration; construction management; and other support which calls upon the Corps engineering, contracting, and construction expertise. For each specific event, Headquarters augments its staff to manage the event concerning resource allocation of dollars and people, logistics of moving people and materials, funding contractors and materials and coordination with agencies involved in the event. These augmentation activities include overtime for Headquarters staff, travel to the event area, materials and supplies, increased staff from the field, and Geographic Information System (GIS) services to support disaster operations.

ACTIVITIES UNDER THE GENERAL EXPENSES APPROPRIATION

The FY 1996 request for the General Expenses account is $164,725,000, an increase of $12.2 million from the FY 1995 funded level of $152.5 million.

The General Expenses appropriation provides for the executive direction and management of the overall Civil Works program through the Office of the Chief of Engineers and the eleven Major Subordinate Commands. It also funds the Coastal Engineering Research Board, which reviews and recommends coastal engineering research and development project priorities; the Humphreys Engineer Support Activity, which provides administrative support to the Corps headquarters as well as other Corps tenants at the Humphreys Engineer Center at Fort Belvoir; the Engineering Strategic Studies Center, which performs analytical support for the Civil Works mission; and the Water Resources Support Center, which provides a variety of water management functions such as conducting and managing national studies, special studies in support of the Civil Works mission, data collection and distribution, and technical support to other Corps offices in matters dealing with water resource management, also located at Fort Belvoir.

The primary purpose of the General Expenses account is to assure that definitive policy guidance, program management, coordination, and oversight are provided for all Corps activities toward execution of a comprehensive Civil Works program.

The Corps continues to streamline its executive functions in compliance with the Administration's National Performance Review and Reinventing Government initiatives. A review of the roles and missions of organizational levels was conducted in FY 1994, which resulted in several management improvements including the consolidation of policy review functions at Headquarters and of technical review at District offices. Three subsequent task forces are currently reviewing the Headquarters structure, Division Office roles and missions, and the implementation of technical project review at Districts. Implementation of these recommendations will result in more cost effective and timely products, while focusing on customer care.

As the Chief mentioned in his statement, we have taken steps to eliminate all Headquarters Centralized Accounts by the end of FY 1995. Those activities deemed necessary for continuation will either be direct-funded in the most appropriate account or where there is a clear benefit to the projects and a user need, charged on a fee for service basis, such as magazine subscriptions which are more cost effective ordered centrally. Former Centralized Accounts' system development costs, funded with Plant Replacement and Improvement Program (PRIP) in FY 1994 and FY 1995, will continue with that funding until they are fielded.

In compliance with the FY 1995 Appropriations Act, the Headquarters issued guidance to the field more clearly defining those Headquarters and Division Office activities which must be funded with General Expenses account funds. Implementation of this guidance resulted in some Division Office staff, which were previously funded by other Title I funds, to be absorbed within the General Expenses account, while others have been transferred to districts or laboratories. The temporary personnel impacts of this language will be alleviated as policy and technical review functions are eliminated at Divisions and staffing is realigned. Overall, from FY 1989 through FY 1995, the General Expenses funded workforce has been reduced by about 15%, with the Headquarters reduction at 24%. The field workforce has been reduced by approximately 7% during this same period.

The FY 1996 General Expenses budget was formulated in two parts: Baselevel Operating Expenses and Civil Program Accounts. Baselevel Operating Expenses are primarily labor at 71% of the total funding; fixed costs for rent, utilities, communications, and contractual services, comprising 23%; and 6% for discretionary operating expenses, such as supplies and material, travel, printing, and equipment. Civil Program Accounts consist primarily of those activities previously centralized and billed back which, after a thorough review, are considered necessary for continuation as a Headquarters activity.

The baselevel operating cost increase over FY 1995 is $5.2 million, or 3.3% overall for personnel compensation cost increases, cost increases associated with implementation of the Corps of Engineers Financial Management System (CEFMS), and some new costs to the GE account that were previously funded by other Title I funds, such as travel.

The Civil Program Accounts include automated systems, maintenance of engineer guidance, long-term training and professional development, and mission unique requirements, such as the Headquarters Relocation Project. A full description of each of the activities included in the Program Accounts is provided in the Justification of Estimates supporting data for the General Expenses appropriation provided with the FY 1996 budget submission to Congress.

ACTIVITIES UNDER THE REVOLVING FUND

The FY 1996 Plant Replacement and Improvement Program obligations under the Revolving Fund for items designed to improve productivity, increase efficiency, modernize, and improve the Corps equipment and operational capabilities, and increase safety are estimated at $93 million. This figure includes $18.7 million for six new items: $.7 million is for a new analytic laboratory for the Waterways Experiment Station; $7.5 million is for rehabilitation of the dredge McFARLAND for the Philadelphia District; $6.5 million is for a new gatelifter crane for the Louisville District; $.5 million is for a crane barge replacement for the St. Louis District; $.5 million is for video teleconferencing equipment and facilities at Corps district and division offices; and $3 million is for systems furniture at the Los Angeles District. $33.8 million is for continuing major items and $40.5 is for expenditures on the design, rehabilitation, construction, acquisition, additions and improvements of miscellaneous items of plant and equipment which will total less than $700,000 each.

CENTRALIZED ACCOUNTS

Prior to FY 1996, the Corps charged back to projects certain activities that were more economical and efficient to perform centrally than separately at all districts and divisions. These activities were identified as Headquarters Centralized Accounts. In response to the House Appropriations Committee's concerns over the management of these accounts, the Chief of Engineers decided to eliminate them, effective the beginning of FY 1996. To carry out this decision, all centralized accounts were reviewed; some were eliminated while others were retained, but generally at lower funding levels. The budget justification for Remaining Items includes a section on Centralized Accounts which details the proposed disposition of each Headquarters Centralized Activity.

For each account retained, a more appropriate funding source has been identified. Those determined most appropriate for direct funding will be identified in those appropriations' budget justifications. Other accounts will be funded on a "fee-for-service" basis.

The Corps has also issued the guidance on division billbacks which implements restrictions in the FY 1995 Appropriations bill.

AUTOMATION

The Corps has again included an estimate of automation costs. Costs are displayed under three categories, hardware acquisition, software or automated systems, and automation personnel and include costs for some items described earlier in this statement such as Geographic Information Systems and the Real Time Water Control Research Program. Total hardware acquisition costs for FY 1996 are estimated at $44.8 million. $12 million of these costs are included in the FY 1996 Revolving Fund Plant Replacement and Improvement Program (PRIP) request. The remainder will be paid for using the General Expenses appropriation funds, district or laboratory overhead accounts, or funds provided for specific Civil Works studies, projects or programs. Total automated information systems costs for FY 1996 are estimated at $27.4 million. This total includes $2.2 million in personnel costs. Total estimated automation personnel costs for FY 1996, excluding the $2.2 included under automated information systems, are $15.8 million. The Corps continues to look forward to working with the Appropriations Subcommittees to insure that the data provided in future automation budget submission meets Subcommittee requirements as well as facilitating Corps management of automation resources.

SUPPORT FOR OTHERS

In FY 1996, the Corps estimates support will be provided to over 30 various Federal Agencies. The estimated dollar value of the Corps efforts and the resulting construction could total $800 million. The actual program size will depend on various factors: requesting agency's appropriation which often is not known until the first quarter of the fiscal year, final agency decisions made on how these appropriated funds will be dispersed for projects, and the magnitude of natural emergencies.

ACTIVITIES UNDER OIL SPILL RESEARCH

The FY 1996 budget request of $850,000 for funds for oil spill research under Title VII of the Oil Pollution Act of 1990 authorizes use of the Oil Spill Liability Trust Fund to perform oil pollution research. The request would provide funds to continue research on the development of an airborne sensor system that can analyze and display oil spill conditions in real-time on land and water. This information would be used in the clean up response to display and guide the clean up equipment to the most critical areas.

CONCLUSION

This concludes the detailed statement of Major General Stanley G. Genega on Remaining Items of the Fiscal Year 1996 Civil Works Budget.

[CLERK'S NOTE.—The remaining items justification sheets follow:]

Justification of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

SUMMARY OF REMAINING ITEMS

GENERAL INVESTIGATIONS

	FY 1995 Allocation	FY 1996 Request	Increase (Decrease)
	$	$	$
1. Surveys			
c. Special Studies	3,000,000	4,524,000	1,524,000
d. Review of Completed Projects	600,000	600,000	0
e. Cooperation with Other Federal Agencies, States, and Non–Federal Interests	8,870,000	14,790,000	5,920,000
2. Collection and Study of Basic Data			
a. Flood Plain Management Services	7,950,000	15,000,000	7,050,000
c. Other Programs			
(1) Stream Gaging (U.S. Geological Survey)	880,000	770,000	(110,000)
(2) Precipitation Studies (National Weather Service)	650,000	550,000	(100,000)
(3) International Waters Studies	500,000	500,000	0
(4) Hydrologic Studies	890,000	770,000	(120,000)
(5) Scientific and Technical Information Centers	300,000	350,000	50,000
(5) Coastal Field Data Collection	3,950,000	4,000,000	50,000
(7) Transportation Systems	1,250,000	950,000	(300,000)
(8) Environmental Data Studies	155,000	160,000	5,000
(9) Remote Sensing/Geographic Information System Support	300,000	400,000	100,000
(10) Flood Damage Data	0	500,000	500,000
(11) Automated Information Systems Support	3,185,000	3,605,000	420,000
(12) National Spatial Data Infrastructure	0	2,050,000	2,050,000

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SUMMARY OF REMAINING ITEMS

GENERAL INVESTIGATIONS (CONTIUED)

	FY 1995 Allocation	FY 1996 Request	Increase (Decrease)
	$	$	$
3. Research and Development	25,200,000	26,000,000	800,000
4. Construction Productivity Advancement Research	6,000,000	6,000,000	0
5. Economic Impacts of Global Warming	150,000	150,000	0
6. Evaluation of Environmental Investments Research	2,000,000	2,424,000	424,000
7. Earthquake Engineering Research	2,000,000	2,500,000	500,000
8. Zebra Mussel Control Strategies for Public Facilities	2,000,000	2,000,000	0
9. Wetlands Research	0	2,000,000	2,000,000
10. Geographic Information Systems Research	0	500,000	500,000
Totals	69,830,000	91,093,000	21,263,000

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APPROPRIATIONS TITLE: General Investigations, FY 1996

1. SURVEYS - CONTINUING

c. Special Studies

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
1) Environmental Service Partnerships					
	4,967,000	2,852,000	1,500,000	615,000	0

The amount of $615,000 is requested in FY 1996 to complete this demonstration program aimed at increasing private sector participation in the provision of environmental services.

Currently many communities are having difficulty assembling the financial and technical resources to meet environmental compliance requirements. The involvement of the private sector can lead to increased efficiency and free up municipal revenues for providing other public services. This program allows the Department of the Army to work with other Federal agencies, particularly the Environmental Protection Agency, and state and local governments to encourage private sector involvement in the financing, planning, design, construction and operation of solid waste, water supply, and wastewater treatment facilities.

Since FY 1991, the effort centered on market feasibility studies to develop privatization action plans or requests for proposals for our non-Federal partners. During the first four years, 76 studies were completed. In addition, work was completed on a model that local communities could use to request proposals for environmental services from the private sector, and a computer model was developed that produces cost and revenue data for alternative facilities. During FY 1995 it is anticipated that 20 to 25 studies will be initiated.

In FY 1996, market feasibility studies will be the focus of the program. About 10 to 15 studies will be initiated during the year and, several are expected to produce requests for proposals from the private sector for specific projects. A program assessment and completion report will also be finalized and submitted to Congress.

APPROPRIATIONS TITLE: General Investigations, FY 1996

1. SURVEYS - CONTINUING

c. Special Studies

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
(2) National Dredging Need Study of Ports and Harbors	2,500,000	591,000	1,000,000	909,000	0

This study is a macro level assessment of national port and harbor dredging needs and would include but not be limited to: 1) an analysis of existing and projected future project depths for national ports and harbors; 2) an examination of the types and sizes of ships in use under existing and future conditions; 3) an analysis of existing and projected world trade patterns; 4) an assessment of the future national waterside infrastructure needs; and 5) a comparison of drafts of the United States and selected world ports.

The study responds to Section 402 of the Water Resources Development Act of 1992 which authorizes the conduct of such studies as necessary to provide a report to congress which assesses the dredging needs of the national ports and harbors of the United States. The national ports and harbors are crucial links in an intermodal transportation chain which is recognized as a critical element to the U.S. national strategy. They have had to evolve, shift and change to stay abreast of global economic changes, emerging traffic lanes and new market opportunities. The infrastructure investment that is necessary to service the maritime industry is capital intensive. Ports and harbors exist to service an industry which is struggling and rapidly changing to respond to ever increasing customer demands. Technological enhancements in the shipping industry continue to encourage port specialization and cargo concentration for selected commodities. The trend toward consolidation of shipping lines through business coalition, joint ventures, and mergers can mean added business at some ports and a loss for others. The national ports and harbors have high

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APPROPRIATION TITLE: General Investigations, FY 1996

1. SURVEYS - CONTINUING

c. Special Studies

(2) National Dredging Study of Ports and Harbors (Continued)

expectations of increased future international trade which some sources are projecting may triple by 2020. With ecological concerns over port expansion and dredge material disposal increasing, and financial budgetary constraints expanding, a current national assessment of dredging needs could form the basis for a national prioritization for investment strategy towards channel maintenance and improvements for existing and new ports and harbors to maintain/increase U.S. competitiveness in the world market.

In FY 1994, the effort focused on review of previous national studies; creation of a comprehensive database of existing vessels, commodity flows and port facilities/infrastructure; catalogue of existing and proposed channel depths for selected world ports; and preliminary estimates of projected world trade patterns. During FY 1995, the database will be expanded, recent R&D studies will be reviewed, and analytical procedures will be developed to prioritize national port dredging needs.

JUSTIFICATION: The funds requested for FY 1996 would be used to complete analysis of shipping trends and port capacities, complete analysis of port waterside infrastructure constraints, finalize the development and integration of commodity and fleet forecasts into the dredging demand analysis, finalize future conditions of U.S. port channels, finalize current demand for dredging estimates and analyze future dredging needs, continue ongoing coordination efforts with other agencies and the port community, and prepare a draft and final report documenting study efforts and results.

APPROPRIATIONS TITLE: General Investigations, FY 1996

1. SURVEYS - CONTINUING

c. Special Studies

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
(3) National Assessment of Water Supply Demand and Availability					
	5,500,000	0	500,000	3,000,000	2,000,000

There has not been a fundamental, rigorously conducted assessment of National water supply demand and availability since the 1975 Water Resources Council's Second National Water Assessment. In the intervening 20 years many national policies related to drinking water quality, wastewater treatment and non-point source pollution and environmental protection have substantially altered the manner in which water is used. New legislation on watershed management, stormwater runoff, environmental protection and wetlands will continue to alter the patterns of demand and constrain availability of supply. In the meantime urban municipal and industrial needs are growing rapidly and water for ecosystem maintenance will continue to compete with other traditional economic uses of water. A technically sound, comprehensive and consistent assessment of water supply availability and future demands, especially those related to maintaining ecosystems, is now needed to guide national policies concerning the management of current water supply and future investments, and to develop a credible basis for identifying areas with expected critical shortfalls. As part of the assessment strategy, the national study would undertake an extensive collaborative problem identification effort with appropriate federal, state, local authorities, as well as public interest groups, professional societies and tribal Indian groups. Although the basis of the study is to develop a realistic and credible set of water use and availability forecasts to aid policy-making, many issues will arise regarding the efficient allocation, distribution and use of water. Hence, areas of critical water supply conflicts will be identified; ecosystem-based water demands will be assessed; opportunities for increasing water use efficiency will be examined; strategies for long-term water management will be formulated as will the performance of existing systems; areas of water quality limitations will be identified and case studies for further detailed watershed planning will be recommended.

APPROPRIATIONS TITLE: General Investigations, FY 1996

(3) National Assessment of Water Supply Demand and Availability (Continued)

FY 95 - FY 95 funds will be reprogrammed to initiate this study. The first year of effort is a preparatory one that centers on developing a plan of study that is fully coordinated among the key Federal and non-Federal entities that are expected to participate in the study (USGS, EPA, FWS, Forest Service, BR, Commerce, etc.). An analytic framework will be developed (and tested) to project water supply availability (surface and groundwater) and forecast future water demand for each of the 222 USGS sub-basins. Roles and responsibilities will be negotiated among the participants, setting the stage for a fully-funded two-year assessment.

FY 96 - The first full year of the study will be spent on collecting data, refining and applying the hydrologic, demographic and socio-economic impact assessment models to the hydrologic sub-basins, SMSA's and counties. An extensive collaborative effort, centering on public interest groups, water management institutions and water users will be undertaken to examine key water management issues, identify critical areas of chronic shortages; highlight environmental requirements for water; and characterize watersheds of special concern.

FY 97 - The final year of the national assessment will be devoted to completing the technical analysis, evaluating the data and comparing the qualitative appraisals of potential problems with the range of plausible forecast scenarios. Critical areas with chronic shortfalls will be identified and recommended for further watershed management case studies. Potential long-term management strategies will be recommended along with measures to improve current performance of managed water supply systems. Special emphasis will be placed on resolving water-based ecosystem demand conflicts and identifying cost-effective opportunities for increasing water use efficiencies. A report to Congress will be submitted, with technical appendices.

APPROPRIATIONS TITLE: General Investigations, FY 1996

1. SURVEYS - CONTINUING

d. Review of Completed Projects

Study	Total Estimated Federal Cost $	Allocation Prior to FY 1995 $	Allocation FY 1995 $	Tentative Allocation FY 1996 $	Additional to Complete After FY 1996 $
President's Climate Change Action Plan					
	1,200,000	0	600,000	600,000	0

The President's Climate Change Action Plan has been developed to reduce "greenhouse" gas emissions to 1990 levels by the year 2000. The plan identifies forty-four actions to meet the emissions goal. By increasing the capacity of existing Federal hydropower, the need to build additional fossil fueled generation will be reduced along with the emissions.

Studies will be conducted, in coordination with the Department of Energy, to identify and examine opportunities for the private sector to invest in hydropower improvements at Federal facilities in exchange for the lease of the development rights. Estimates from the President's plan indicate lease payments of approximately $480 million being received by the US Treasury by the year 2000 with additional receipts into the following decade. This Federal-private sector hydropower partnership is projected to reduce greenhouse gas emissions by 2.0 million metric tons of carbon equivalent, by the year 2000.

Fiscal Year 1995 funds will be initiate examination of potential hydroelectric power uprating opportunities at Corps facilities. FY 1996 funds will be used to continue this effort. The goal is to examine 7-10 potential hydroelectric uprating opportunities by September 1996.

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APPROPRIATIONS TITLE: General Investigations, FY 1996

1. SURVEYS

e. Cooperation with Other Federal Agencies, States, and Non-Federal Interests

Allocation For FY 1995 $8,870,000 Tentative Allocation FY 1996 $14,790,000

The amount of $12,790,000 is requested for Corps of Engineers activities required for cooperation with other agencies, involved in water resources activities which are primarily the responsibility of those interests. The activities are as follows:

(1) The amount of $600,000 is requested to continue Cooperation With Other Water Resources Agencies. Cooperation with the Department of Agriculture (USDA) is under the Watershed Protection and Flood Prevention Act of 1954 (Section 5 of PL 566-83), as amended; the Flood Control Act of December 22, 1944 (Section 1 of PL 534-78), as amended; and the National Environmental Policy Act of 1969 (PL 91-190). Executive Order No. 10913, dated 18 January 1961, requires that cognizance be taken of constructed and contemplated upstream and downstream USDA works, and that plans be submitted to the Secretary of the Army for review and comment prior to their transmission to the Congress through the President. As the agency responsible for the flood control features of basin program, the Corps of Engineers must provide the Department of Agriculture with information on proposed Corps projects, including their effect on contemplated watershed programs. The Corps is also required by Section 102 (2)(c) of the National Environmental Policy Act of 1969 to review the environmental impacts which would result from installation of USDA project features. Cooperation with the Bureau of Reclamation of the Department of the Interior includes preparation of estimates of flood control requirements, and benefits, and reservoir operating criteria for storage reservoirs to be constructed with Federal funds, in accordance with Sections 1 and 7 of PL 534-78 and Section 7 of PL 984-84, as amended. Studies made by the Bureau of Reclamation of the flood control features of proposed reclamation projects are submitted to the Corps of Engineers for review and determination of the flood control benefits. The Corps of Engineers uses the data collected by the Bureau but makes an independent evaluation of the project. The report of the Chief of Engineers is used by the Secretary of the Interior in making allocation of project cost to flood control. Corps representation is required for cooperation with Federal and state agencies such as River Basin Compact Commissions; Interstate River Basin Compacts; and Regional Planning Commissions in authorized, but unfunded investigations.

1. SURVEYS

e. Cooperation with Other Federal Agencies, States, and Non-Federal Interests (Continued)

(2) The amount of $6,000,000 is requested for cooperation with any State and Indian Tribe as specified in Section 22 of PL 93-251, as amended, in preparation of comprehensive plans for development, utilization, and conservation of the water and related resources. Studies undertaken are 50/50 cost shared with the State or Indian Tribe. Since cost sharing was implemented in FY 91 a total of 260 agreements have been executed with 45 states and 14 Indian tribes. Indian tribes were included in FY 93 and their interest is growing rapidly. Even with the cost sharing, there continues to be significant increasing demand for services under this Program. The Report of the Interagency Floodplain Management Review Committee made recommendations which placed increased emphasis on comprehensive environmental and flood plain management planning. This increased emphasis has resulted in increased demend from States for assistance. In addition, the President's initiative to enhance intergovernmental Federal/Tribal relations has generated increased demand from Indian Tribes for services and assistance under this Program.

(3) The amount of $5,000,000 is requested for special investigations. Of this amount, $450,000 provides for; the review of preliminary permit and licenses applications for non-Federal hydroelectric power development either at or affecting Corps water resource projects. The amount of $4,550,000 provides for (1) special investigations and reports of nominal scope prepared pursuant to Congressional and other requests from outside the Corps of Engineers for information relative to projects or activities which have no funds; (2) similar work of detailed scope, as specifically authorized by the Chief of Engineers; and (3) review of reports and environmental impact statements of other agencies. Among the investigations paid for from these funds are reconnaissance investigations of flooding potential and flood damages, bank erosion, drainage, harbor improvements, anchorages, and development of navigation channels. The increase of this request over past years is essential to support increased emphasis in the area of wetlands and watershed quality and a greater focus on water resources protection and development on Native American lands.

APPROPRIATIONS TITLE: General Investigations, FY 1996

1. SURVEYS

e. Cooperation with Other Federal Agencies, States, and Non-Federal Interests (Continued)

(4) Gulf of Mexico Program. The amount of $380,000 is requested to continue activities initiated under Special Investigations. The Gulf of Mexico Program (GMP) is an interagency program, initiated by the U.S. Environmental Protection Agency, for the protection and restoration of the natural resources of the Gulf of Mexico. These natural resources have tremendous environmental and economic significance to the Gulf states and to the Nation. With the funds requested, the Southwestern, Lower Mississippi Valley, and South Atlantic major subordinate commands and their districts will be able to fully participate in development of GMP "Action Plans," attend GMP meetings and conferences, and provide technical support requested by other agency participants. The GMP participants are now concentrating on development of the Action Plans to address: Habitat Degradation; Marine Debris; Coastal Erosion; Toxic Substances and Pesticides; Public Health; Nutrient Enrichment; Living Aquatic Resources; Freshwater Inflow; Information Transfer; and Public Education and Outreach. Many of these Action Plans affect Corps authorized missions in the Gulf of Mexico. It is very important for Corps representatives to be active members of the GMP Policy, Management, and Technical Committees and other working groups.

(5) The amount of $1,200,000 is requested for Interagency Water Resources Development. These are Corps of Engineers district activities, not otherwise funded, that require coordination effort with non-Federal interests. These activities include items such as meeting with City, County and State officials to help them solve water resources problems when they have sought advice or to determine whether or not Corps programs are available and should be used to address the problems. The funds would also be used to cover costs of meeting with potential study sponsors prior to budgeting for a study to insure they fully understand study cost sharing and to obtain an indication of their interest in participating in a future study.

1. SURVEYS

e. Cooperation with Other Federal Agencies, States, and Non-Federal Interests (Continued)

(6) The amount of $230,000 is requested to participate with Federal and state agencies in the National Estuary Program (NEP) administered by the Environmental Protection Agency under the Water Quality Act of 1987 (Section 320 of PL 100-4). The NEP is an interagency planning program to develop management plans for nationally significant estuaries designated by the EPA. To date, the following 26 estuaries have been designated under the program: Puget Sound, WA; Delaware Bay, DE; and Delaware Inland Bays, DE; New York/New Jersey Harbor, NY-NJ; Sarasota Bay, FL; Santa Monica Bay, CA; San Francisco Bay, CA; Galveston Bay, TX; Albermarle/Pamlico Sound, NC; Buzzards Bay, MA; Narragansett Bay, RI; and Long Island Sound, CT-NY; NY; Massachusetts Bay, MA; Barataria/Terrebonne Bays, LA; Indian River Lagoon, FL; Casco Bay, ME; Tampa Bay, FL; San Juan Bay, PR; Corpus Christi Bay, TX; Tillamook Bay, OR; and Peconic Bay, NY. Because of extensive Corps involvement with Federal water resources projects in the nation's estuaries and other responsibilities in waters of the U.S., the Corps has been asked to participate on the management and technical advisory committees of those NEP estuaries being studied. The requested funds would be used to cover costs of Corps field office meeting attendance, field reconnaissance, and data transfer. Because of similar objectives, these funds could also be used for similar coordination activities conducted under the Coastal America initiative.

1. SURVEYS

e. Cooperation with Other Federal Agencies, States, and Non-Federal Interests (Continued)

(7) The amount of $230,000 is requested to continue cooperation with Federal and State agencies, and non-Federal interests in support of the North American Waterfowl Management Plan (NAWMP) administered by the Department of the Interior, Fish and Wildlife Service. The NAWMP is an international program designed to reverse downward trends in North America's waterfowl populations by protecting and improving waterfowl habitats nationwide, particularly in 34 areas within the United States identified as being critical to meeting NAWMP goals and objectives. Department of the Army support to the NAWMP is set forth in an agreement signed with the Department of the Interior on January 23, 1989. The Corps of Engineers has broad water resources development responsibilities and authorities and has stewardship responsibilities for over seven million acres of water and land. Many Corps of Engineers projects contribute directly or indirectly to the habitat base for the nations's waterfowl, and other wetland species. Current and future Corps of Engineer projects are expected to play an even greater role, particularly during years of low rainfall. Also, the Corps of Engineers has recognized extensive environmental engineering and technical expertise and experience that can contribute greatly towards meeting the NAWMP waterfowl habitat improvement goals and objectives. The requested funds would be used to cover costs of Corps of Engineers field office participation in field trips, interagency coordination meetings, and information transfer in response to conditions set forth in the agreement between the Department of the Interior and the Department of the Army. Because of similar objectives, these funds could also be used for similar coordination activities conducted under the Coastal America initiative.

(8) The amount of $200,000 is requested to participate with the National Marine Fisheries Service in planning and evaluating fish habitat restoration and creation opportunities in conjunction with the Civil Works Program. This effort will be carried out as a part of a national effort to create and restore fish habitat. This program, established in a Cooperative Agreement signed by the Department of the Army and the National Oceanic and Atmospheric Administration on January 31, 1991, is to utilize opportunities within the Corps Civil Works Program to benefit fish habitats. The requested funds would be used to cover costs and expenses of Corps personnel in coordinating with NMFS and other agencies, meeting and travel expenses, and in initial reconnaissance level activities associated with the program. Because of similar objectives, these funds could also be used for similar coordination activities conducted under the Coastal America initiative.

1. SURVEYS

e. Cooperation with Other Federal Agencies, States, and Non-Federal Interests (Continued)

(9) Inventory of Dams. The amount of $500,000 is requested for continued up to date maintenance of the National Inventory of Dams. This inventory will be used by Federal and State agencies in conducting effective dam safety programs for the protection of human life and property. The compilation of the National Inventory of Dams was authorized by the National Dam Inspection Act of 1972 (Public Law 92-367); as amended, as a component of the National Program of Inspection of Non-Federal Dams. The inventory, initially compiled in 1975, updated from 1978 through 1981, contained over 68,000 dams. This updated inventory, furnished to Congress in a report published in 1982, served as a reliable and essential data base for conducting the national inspection program. However the 1981 inventory soon become obsolete because data for dams constructed since 1981 were not in the inventory. Therefore, Congress in the Water Resources Development Act of 1986 (Public Law 99-662), Title XII - Dam Safety) amended the National Dam Inspection Act of 1972 to provide for the maintenance of the inventory and periodic publishing of updated information for continuous use during the period of 1988 through 1992. Legislation has been proposed to extend authorization of the non-Federal dam inventory program, which expires in FY 1994. This on-going maintenance effort is a coordinated effort involving data for Federal and non-Federal dams. The reporting effort conducted in 1992 compiled data on 75,591 dams. The final report published in 1993, is in two volumes. Volume I is an executive summary of the data, issues related to dam safety and national infrastructure, conclusions and recommendations. Volume II is a summary of data by state with a CD ROM disk containing the complete data base to be usable on a personal computer. Currently. data input for the 1994 update is being obtained.

APPROPRIATIONS TITLE: General Investigations, FY 1996

2. COLLECTION AND STUDY OF BASIC DATA

a. Flood Plain Management Services

SCOPE: This Corps of Engineers program stems from Section 206 of the 1960 Flood Control Act (PL 86-645), as amended, which authorizes the Secretary of the Army to compile and disseminate data on floods and flood damage potential and to provide guidance to States, Indian Tribes, and local governments for their use in mitigating flood losses. The Flood Plain Management Services Program provides flood hazard information, interpretation, and guidance for sites or short reaches of stream or coast and technical and planning assistance to states, communities and Indian Tribes; develops and disseminates guides and pamphlets to convey the nature of flood hazards and to foster public understanding of the options for dealing with flood hazards; and participates with the Federal Emergency Management Agency and local governments in the conduct of pre-disaster hurricane evacuation and preparedness studies for mobilizing local community responsiveness to natural disasters in high-hazard coastal areas.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1996-00) Program Cost	$75,000,000
Tentative Allocation for FY 1996	15,000,000
Balance to Complete Five-Year Program after FY 1996	60,000,000
Allocation For FY 1995	7,950,000
Increase of FY 1996 from FY 1995	+7,050,000
Average Annual Allocation for FY 1991-95	8,893,000

JUSTIFICATION: The 1993 Midwest floods, the 1994 floods in Georgia, Florida, and Texas, and the January 1995 floods in California, have raised public awareness and increased the demand for information and assistance in mitigating flood losses. The funds requested for FY 1996 are to address the growing number of requests from state, regional, local governments, Indian Tribes, and non-Federal agencies and to expand the types of services provided to them. The increase of $7,050,000 over the FY 1995 allocation will allow for increased technical services to Native Americans and giving special emphasis to assisting Federally recognized Indian Tribes with flood plain management planning on Indian land; for aiding states and local communities to become more involved in the application of flood plain management measures by providing the increased site specific flood and flood plain data and assistance needed for working with community planners, associations, groups, and individuals; for increased efforts to identify flood hazards in smaller

2. COLLECTION AND STUDY OF BASIC DATA

a. Flood Plain Management Services (Continued)

communities under growth pressures; for increased special studies that concentrate on the mitigation of future flood damages and give increased emphasis to the application of non-structrural measures; and for expediting critical ongoing pre-disaster hurricane evacuation and preparedness studies for states and counties along the Atlantic Ocean and the Gulf of Mexico.

ACCOMPLISHMENTS: Responses to requests from Federal and non-Federal agencies, communities, Indian Tribes and individuals for flood-related information, interpretation, and guidance numbered 40,000 during 1994 and involved property valued at $5 billion. The Corps participated in pre-disaster hurricane evacuation and preparedness studies for high-hazard areas in Louisiana, Massachusetts, Rhode Island, Florida, Connecticut, North Carolina, South Carolina, New York, Hawaii and the Virgin Islands; provided support for updating and improving mathematical models of flood plain hydrology and hydraulics; developed training programs in flood plain hydrology and hydraulics; and prepared flood-proofing studies.

APPROPRIATIONS TITLE: General Investigations, FY 1996

2. Collection and Study of Basic Data

c. Other programs

(1) Stream Gaging (U.S. Geological Survey)

SCOPE: The Corps of Engineers cooperates with the U.S. Geological Survey in this effort, and contributes funds for all or part of the cost of the operation and maintenance of about 2,400 stations that are of special importance to the Corps mission. The Corps established this continuing, cooperative program in March 1928, so that streamflow data would be available to meet special needs concerning the corps water resources responsibilities.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1996-2000) Program Cost	$4,200,000
Tentative Allocation for FY 1996	770,000
Balance to Complete Five-Year Program after FY 1996	$3,530,000
Allocation for FY 1995	880,000
Decrease of FY 1996 from FY 1995	110,000
Average Annual Allocation for FY 1991-1995	685,000

JUSTIFICATION: The Corps of Engineers makes extensive use of streamflow records in the planning, design, construction, and operation of water resources projects. The Basic network of stream gaging stations operated by the Geological Survey under its normal functions is inadequate to meet all the special needs of the Corps water resource development responsibilities. Accordingly, a cooperative program was established under which funds are transferred to the Survey to cover, partially, the cost of operating specific stations. In the optimum development of water resources, it is essential that continuous records of streamflow be maintained at specific sites over a long period of years to provide a reliable measure of water resources available for various uses. This budget item covers only the non-project portion of the cooperative program. To continue the operation of stations of special interest to the Corps, an estimated total of $17,100,000 will be required by the U.S. Geological Survey during Fy 1996, exclusive of funds received from other cooperative sources. The operation and maintenance cost of these stations will be financed from three sources, as follows: (1) $770,000 appropriated directly to the U.S. Geological Survey for special Corps stations; (2) $770,000 from this budget item for stations not directly attributed to the Corps projects; and (3) $15,560,000 from Corps funds budgeted elsewhere for authorized projects and studies. The basic program will remain at essentially the same level as in previous years.

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ACCOMPLISHMENTS: Records for the streamflow stations supported by transfer of funds are not only used by the Corps, but the data are used by the National Weather Service as the basis for many public flood forecasts. In addition, the data are published in a regular series of reports by the Geological Survey and provide valuable information for other Federal and state agencies and the public.

COORDINATION: This program is fully coordinated with the U.S. Geological Survey. Costs for conducting the work are compiled by representatives of the Survey to identify a basis for the transfer of funds to that agency.

APPROPRIATIONS TITLE: General Investigations, FY 1996

2. Collection and Study of Basic Data

c. Other Programs

(2) Precipitation Studies (National Weather Service)

SCOPE: This item pertains to the Hydrometeorological Studies Program conducted by the National Weather Service for the Corps of Engineers. These studies are conducted by a technical services organization in the National Weather Service that prepares meteorological studies for use by the Corps in planning and designing various types of water resources projects. The Corps transfers funds in support of this work.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1996-2000) Program Cost	$2,750,000
Tentative allocation Requested for FY 1996	550,000
Balance to Complete five-year Program after FY 1996	2,250,000
Allocation for FY 1995	650,000
Decrease of FY 1996 from FY 1995	-100,000
Average annual Allocation for FY 1001-1995	480,000

JUSTIFICATION: The scientific services provided by the National Weather Service under this program consist of review of the meteorological aspects of storms completed under the Storm Study Program conducted by the Corps, development of probable maximum precipitation estimates for regional and for specific river basins for use in engineering studies, development of meteorological parameters pertaining to hurricane and other wind and tide phenomena, and other studies necessary to accomplish the Corps' mission. Funds in the amount of $550,000 will be required in FY 1996 to continue the program at a level consistent with Corps needs. The entire cost of the hydrometeorological studies program is funded under this budget item.

ACCOMPLISHMENTS: Since FY 1989, the Hydrometeorological Branch of the National Weather Service continued to make progress of major revision of Probable Maximum Precipitations (PMP) study for the Northwest States. This study was completed in the third quarter of 1993, the report is scheduled for publication in FY 1994. In FY 1991, NWS began a study of precipitation frequency for the southwestern part of the United States, this work will continue during FY 1995. A major accomplishment in FY 1993-94 time frame is the development of Probable Maximum Precipitations (PMP) for use in planning, design, and construction of the Santa Ana and American Rivers projects in California. In conjunction with these two studies, a cost saving decision was made to update a 1936 report on PMP for the entire State of California. This is a major task scheduled for completion in 1995. As another cost saving effort, the Corps continued to support the National Weather Service in development of computer model application for hydrometeorological analysis. This allowed the California PMP studies to be expedited by reducing storm data processing time from a year to one or two - month period.

FISCAL YEAR 1996: The major effort in FY 1996 will be to continue work on revision of the Precipitation-Frequency atlas for the United States, particularly for the Southwest. Other major tasks for this period will include publication of final Hydrometeorologic Report 36 (HMR 36) for California. Maintain capability to do site specific work for PMP analysis for projects throughout the United States, an example is the scheduled development of Standard Project Storm data for Hawaiian Islands' urban flood control studies. Continue support NWS's effort to install computer capability for automated processing of storm data, in order to reduce storm processing time.

COORDINATION: This program is fully coordinated with the National Weather Service

APPROPRIATION TITLE: General Investigations, FY 1996

2. Collection and Study of Basic Data

c. Other Programs

(3) International Waters Studies

SCOPE: The Boundary Waters Treaty of 1909, the Niagara River Treaty of 1950, the Columbia River Treaty of 1961, and other less formal agreements between the Governments of the United States and Canada are concerned with the regulation, control, and use of boundary waters. Under the Boundary Waters Treaty of 1909, the International Joint Commission (IJC) was established and empowered to establish local boards, which conduct investigations and assure adherence to orders of approval pertaining to use of boundary waters, as issued by the Commission. Corps of Engineers representatives serve on the following IJC Boards: St. Croix River, Champlain-Richelieu, Lake Champlain, St. Lawrence River, Niagara, Lake Superior, Lake of the Woods, Rainy Lake, Souris-Red Rivers Engineering, Souris River Control, Kootenay Lake, Osoyoos Lake, and the Skagit River. Under separate treaties, Corps representatives serve on the Columbia River Treaty Permanent Engineering Board, the Columbia River Treaty Entities, the International Niagara Committee, and the International Lake Memphremagog Board. These Boards and Committees hold joint meetings, review report drafts and correspondence, make field inspections, obtain, collect, and analyze hydrologic and hydraulic data, and report their findings to the establishing parties. The degree of study activity varies depending upon the requirements of the Commission or Treaty under which they were established. These efforts assure better control, use, and orderly development of the jointly-controlled water resources, and are of importance in attempting to meet water demands resulting from an expanding economy along the United States-Canadian border. Studies are closely related to the Corps of Engineers' Civil Works program and are summarized in the Assistant Secretary of the Army for Civil Works Annual Report.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1996-00) Program Cost	$2,500,000
Tentative Allocation for FY 1996	500,000
Balance to Complete Five-Year Program after FY 1996	2,000,000
Allocation for FY 1995	500,000
Decrease in FY 1996 from FY 1995	000,000
Average Annual allocations for FY 1991-95	744,000

JUSTIFICATION: The $500,000 requested in FY 1996 is for normal participation of Corps personnel in assisting the United States Government in meeting its obligations under provisions of boundary water treaties and other international agreements between the United States and Canada, and for an investigation to modify the 1950 Niagara Treaty. On 1 August 1986, the two Governments sent the (IJC) a reference (request for study) on the fluctuating Great Lakes water levels, requesting a full evaluation of the effects of a range of high and low water conditions in the Great Lakes Basin, and joint recommendations on how to mitigate/alleviate them. The U.S. Army Corps of Engineers is the lead U.S. Federal agency for the study. The Canadian counterpart is Environment Canada. The Board submitted its report to the IJC in 1993, recommending follow-up actions. A number of follow-up activities are anticipated in FY

APPROPRIATION TITLE: General Investigations, FY 1996

2. Collection and Study of Basic Data

c. Other Programs

(3) International Waters Studies - (Continued)

96. The IJC Board's forwarded its report to the U. S. and Canadian governments in 1994, notifying Governments of its intent to further examine the Board's recommendations. The Niagara Treaty of 1950 governs the split of Niagara River Waters between the U. S. and Canada and between the uses of the waters. The Treaty may be terminated by either the U. S. or Canada beginning in the year 2000 with a one year notice. Present and planned modifications have created new demands for Niagara River waters. During FY 96, investigations will be conducted concerning protection of the security of U. S. interests, to provide for the continued beneficial use of Niagara River waters, and to develop the U. S. position for renegotiating the Treaty. The investigations will involve several Federal and state agencies on a board chaired by the Corps of Engineers and coordinated with the Niagara Board of Control. The reconnaissance phase will build upon and follow procedures similar to the IJC's Reference Study, but it will not be an international effort at this point. The Federal interest requirement for recommendations may be non-traditional depending upon the outcome of the investigations. A 50% Federal/50% non-Federal cost-shared feasibility level effort would follow. Consultation with FERC and coordination with New York Power Authority (NYPA) confirms the need to proceed at this time and their respective interest in the study. NYPA has signed a letter saying they are willing to cost-share a feasibility study effort if a reconnaissance study shows promising results.

ACCOMPLISHMENTS: IJC LEVELS REFERENCE STUDY - Phase II of the study was completed in March 1993. IJC report to Governments was submitted in december 1993.

FISCAL YEAR 1996: Follow-up efforts to the Levels Reference Study will include data collection and analysis and testing of a potential alternative Lake Ontario regulation plan. Additional flow data will be obtained and used to update the rating curve used to verify compliance with Niagara Treaty requirements. New data will be used to enhance the unsteady flow model of the Upper Niagara and an ice jam model will be applied to examine measures to reduce flooding. The performance of a new plan for regulating Lake superior outflows will be used to optimize water resources use and a water supply process model will be evaluated for application in regulation decisions. Computer software will be developed to accommodate use of the basin-wide automated data system. The investigation into modifying the Niagara Treaty of 1950 will build upon and use the Reference Study analysis techniques.

APPROPRIATION TITLE: General Investigations, FY 1996

2. Collection and study of Basic Data

c. Other Programs
    (4) Hydrologic Studies

SCOPE: The scope of activities under this item is determined from USACE Commands and Laboratories to meet high-priority needs. These items are not covered under regular Civil Works GI and O&M funding programs. Major activities to be undertaken in the program generally include the collection of basic hydrologic data and the studies of these data for major storm events or certain special hydrologic processes. The information to be derived from this program will improve hydrologic engineering techniques for the planning, design, construction, and operation of water resources projects. The program consists of four sub-items: 1. Storm Studies, 2. General Hydrologic Studies, 3. Sedimentation Studies, and 4. Streamflow and Rainfall Data.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1996-2000) Program Cost	$3,990,000
Tentative Allocation Requested for FY 1996	770,000
Balance to Complete Five-Year Program after FY 1996	3,220,000
Allocation for FY 1995	890,000
Decrease of FY 1996 from FY 1995	- 120,000
Average Annual Allocation for FY 1991-1995	457,000

JUSTIFICATION:

1. Storm Studies: The Storm Studies Program is a continuing investigation of major storms for the purpose of accumulating comprehensive rainfall data. These data are used to refine the regional hydrometeorological information throughout the nation. The up-to-date hydrometeorological information is essential for design of new projects as well as for safety assessment of existing projects. We have substantial need for hydrologic data for initiation and completion of water resources studies. These data are required in the evaluation of flood-producing potentials of river basins, the hydrologic performance of appurtenant features and constitute the major portion of the basic data used in rainfall frequency and probable maximum precipitation determinations. Funds in the amount of $114,000 will be required in FY 1996 to continue work on previous storm studies and to finish carryover efforts from FY 1995. Some studies in FY 1995 were slowed or delayed in order to focus efforts on storm studies in the Upper Mississippi River Basin. Rare storms impacted this eight state area - Illinois, Iowa, Kansas, Nebraska, North Dakota, Minnesota, Missouri, and Wisconsin. Runoff produced the largest flood of the 20th century at St. Louis, Missouri and generated vast areas of flooding in many other locations. Meteorologic and hydrologic evaluations of these storms began in FY 1994. Other storm studies will continue or begin again on the following: July 1991 west of St. Louis County, River des Teres, MO; July 1990 at eastern NE and western IA; June 1991 at Elkhorn River Basin, NE and Part I storm study of the Jan 1982 event in San Francisco Bay area.

2. General Hydrologic Studies: Studies under this sub-item include needed improvement in the analysis of rainfall-runoff relationships, flood frequency, snowmelt studies, hydrograph development and routing at selected watersheds, model calibrations in urban areas, analyses of past floods, methods for the hydraulic analysis of non-gaged streams, and other studies of related hydrologic nature. Several studies were delayed in order to study the rare storm during July 1993 in the Upper Mississippi River Basin. This storm and flood caused special efforts to begin in FY 1994 which require additional funds to continue. The nature of the storm caused vast areas of flooding with rare opportunities for unique hydrologic studies not routinely possible. Studies focused on performance of appurtenant levee features located on the interior of existing leveed areas. All of these studies began in FY 1994 in an urgent response to the flooding, continue this fiscal year and will finish in FY 1997. These studies are required to better understand the hydrologic performance of appurtenant levee features during extreme flooding and thus provide an information base to improve project performance of these features for existing or new levee projects. The evaluation will focus on existing levee projects in the impacted areas. Sites will reflect differences in watershed size, warning times, interior features and interior watershed size. The program will evaluate the hydrologic performance of existing interior project features concerning adequacy of ponding areas; adequacy of outlet and pump capacity for interior flood flows; accuracy of coincidental flooding predictions for mainstem and interior areas; and meteorologic and hydrologic factors constraining performance. Gate closure experience will be evaluated to relate storm warning times to adequacy of actions taken during flood events. Overtopping features of levees will be evaluated with respect to inflow locations and volumes, timing and egress problems due to trapped waters. Small urban watershed evaluations will compare actual runoff quantities and timing of peaks to predicted values. Other studies will continue studies of techniques to improve the accuracy of hydrologic modeling. New radar applications in rainfall-runoff forecast is a continuing concern. Funds in the amount of $398,000 in FY 1996 will be required to continue this sub-item at a level to insure proper and orderly progress and to finish studies begun in FY 1994. A final set of studies in New England region will continue comprehensive hydrologic analysis of 1987 flood event and will provide resource data for future potential planning and design studies, as well as reservoir operation. An effort began in FY 1985 on re-examination of water yield and potential reallocation of storage space in Corps reservoirs is continuing.

3. Sedimentation Studies: The program is a continuing effort in which funds are used for conducting non-project sedimentation studies, and for the Corps share of an interagency sediment investigation program. The sedimentation studies include: promoting and supporting the standardization and development of equipment, criteria and methodology for the collection, analysis of suspended and bedload sediment characteristics of natural streams; and laboratory studies. The Hydraulics Laboratory, Waterways Experiment Station is sponsored by the Federal Interagency Sedimentation Committee (members from 18 agencies) and constitutes the major work effort under this sub-item. The rare and unique flooding in the Upper Mississippi River Basin caused substantial deposition, scour and clogging of critical features of levees. Analyses considered the impact of levee overtopping on the protected areas of levees. These impacts caused vast deposition of valuable lands and clogging of critical outlets. Studies to better understand the nature of the impact and better techniques to study the impacts need funds this fiscal year. The studies will continue through FY 1997. Funds in the amount of $122,000 in FY 1996 will be required to carry on sedimentation studies at the base level and the begin the storm related sediment analyses.

4. Streamflow and Rainfall Data: This is a continuing program in which funds are used for installation and operation of streamflow and rainfall gages of non-project nature that are required by the Corps in addition to the stations in the cooperative programs conducted by the U.S. Geological Survey and the National Weather Service for the Corps. Funds are needed to continue support for the basic data collection in the Sleepers River Watershed in Vermont. Additionally, gages are needed to more accurately predict hurricane surges and obtaining historical high water marks. An amount of $136,000 in FY 1996 is required to continue the establishment and operation of these special-purpose gages, purchasing additional hurricane-surge gages and to determine historical flooding in urban sites.

ACCOMPLISHMENTS:

1. Storm Studies: This continuing program was organized in 1939 for the purpose of investigating rainfall from major storms of record throughout the entire United States. The selected storms are analyzed for frequency, associated runoff and precipitation data. These efforts are coordinated with the National Weather Services (NWS) Hydrometeorological Branch and the resulting data from these studies are used in design of water resources projects throughout the country. During the period, Corps offices have gathered data on other major storms, reviewed the scope and interim results of ongoing studies by NWS on development of standard project and probable maximum storms at various basins throughout the United States and territories. Storm studies are being utilized in probable maximum precipitation studies in coordination with NWS for northwest and southwest United States. These studies were not carried at the full level of effort because resources were directed at the studies of the July 1993 storm in the Upper Mississippi River Basin. Efforts began on the 1993 flood analyses at the first of the fiscal year to gain insights to storm parameters. These storms provided rare and unique opportunities to study intense and widespread storms. Studies or preliminary evaluation of the 1993 storms in the Upper Mississippi River Basin were accomplished for the following: June 17-18 storm over Minnesota, Iowa and Wisconsin with flooding on the Minnesota, Mississippi and Chippewa-Black Rivers; July 5 storm over Iowa with flooding on the Skunk and Des Moines Rivers; July 8-9 storm over Iowa which increased flooding problems on the Skunk, Des Moines, and Racoon Rivers; July 15-16 storm over North Dakota and Minnesota, resulting in increased flooding along the Missouri and Mississippi Rivers; and July 22-24 storm over Nebraska, Kansas, Missouri, Iowa, and Illinois, with resulting flooding on the lower Missouri and Mississippi Rivers. The information from the studies of the 1993 storms will be used by the National Weather Service to develop rainfall frequency information of general applicability.

2. General Hydrologic Studies: Examples of some of the more important studies accomplished under this program are: determination of rainfall-runoff relationship in urban areas; general hydraulic model calibration; snow cover surveys; and adaption of hydrologic programs to CADD equipment. Work continued on the regional frequency studies for three major river basins in the North Central States. The long-term foothill streams of Colorado flash flooding project progressed as scheduled. Particularly encouraging to date are the data developed for rainfall-runoff on small watersheds and evaluation of flood potential in connection with design of structure located in the flood basin. Works continue on the water yield study. Some of these studies were also slowed in order to begin general studies associated with the July 1993 flood in mid-west. The analyses started will include hydrologic performance of appurtenant features on the interior of leveed areas. Work will continue in the coming fiscal year when more data is collected.

3. Sedimentation Studies: The majority of funds allotted to this sub-item are to assist in financing the Corps share of the cooperative Interagency Sedimentation Project at the Hydraulics Laboratory, Waterways Experiment Station. The balance of sedimentation funds is allotted for collection and analysis of suspended and bedload data.

4. Streamflow and Rainfall Data: Stations funded under this sub-item are generally established and operated several years prior to anticipated authorization for project-type activities, in order to provide a background of observed data on which to base the planning and design of projects. Progress continues on the special gages which are used to obtain hurricane-surge data and in flood prone areas to document historical flood and calibration of hydrologic models. A significant effort was directed at collecting perishable data on streamflow and rainfall that occurred during the July 1993 flood in the Upper Mississippi River Basin. An eight state area was impacted by the flooding and caused many unique and rare opportunities to study the hydrologic performance of appurtenant features of levees on the interior.

FISCAL YEAR 1996: The appropriation requested for FY 1996 is required to continue the Hydrologic Studies Program at the level required to meet high-priority needs.

ITEMS	FY 1995	FY 1996
1. Storm Studies	$ 150,000	$ 150,000
2. General Hydrologic Studies	448,000	398,000
3. Sedimentation Studies	122,000	122,000
4. Streamflow and Rainfall Data	170,000	136,000

COORDINATION: The storm studies are prepared by USACE commands and are reviewed by the National Weather Services in the preparation of probable maximum precipitation estimates for the Corps. The Interagency Sedimentation Project is conducted cooperatively, and jointly funded, by eight Federal agencies. Information concerning streamflow and rainfall data collection by the Corps under this activity is made available to the U.S. Geological Survey and the National Weather Service.

APPROPRIATIONS TITLE: General Investigations, FY 1996

2. Collection and Study of Basic Data

c. Other Programs

(5) Scientific and Technical Information Centers

SCOPE: Five information analysis centers (soil mechanics, concrete technology, coastal engineering, hydraulic engineering, and cold regions engineering) located at the U.S. Army Engineer Waterways Experiment Station and the Cold Regions Research and Engineering Laboratory, operating in specific technical areas closely related to Civil Works activities, are supporting the information needs of Department of Defense (DOD) engineers and scientists. The function of each center is to acquire, examine, evaluate, and disseminate newly published scientific and technical information generated within the U.S. and abroad.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1996-2000) Program Cost	$2,000,000
Tentative Allocation for FY 1996	350,000
Balance to Complete Five-Year Program After FY 1996	1,900,000
Allocation for FY 1995	300,000
Increase of FY 1996 over FY 1995	50,000
Average Annual Allocation for FY 1991-1995	170,000

JUSTIFICATION: The Department of the Army, through Army Regulations 70-45 and 70-22, has established policies with the objectives of eliminating unnecessary duplication of R&D effort and supporting the information needs of scientists and engineers, and has authorized the formation of centers for analysis of scientific and technical information. The specified information centers critically evaluate the technical validity and merits of published and unpublished research, design, construction, and similar technical report publications; and summarize these presenting new, significant, and useful information. The effectiveness of each of the information analysis center activities and services is evaluated annually.

ACCOMPLISHMENTS: At two-month intervals, technical summaries and evaluations of about 10 newly acquired and potentially valuable U.S. and foreign books and reports are distributed within DOD. State-of-the-art surveys, special technical reports, and translations are prepared in response to user requests. Several thousand inquiries (telephone, letters, Scientific and Technical Information Centers (Cont'd)

visits) requiring technical responses are processed annually, and numerous technical evaluations, bibliographies, and reports are prepared. About 80% of the inquiries are generated by Federal and State governmental elements, the balance from private industry and foreign governments.

Technical Field	Subjects	Primary Service Areas
Soil Mechanics	Embankment and foundation engineering, engineering geology	DOD
Concrete Technology	Cements, concrete, aggregates, concrete construction	DOD
Coastal Engineering	Wave action, shore processes, inlet and estuary dynamics, shore protection and navigation structures, coastal construction	National
Hydraulic Engineering	River, harbor, and tidal hydraulics; flows through pipes and conduits; spillways; hydrodynamics	DOD
Cold Regions Engineering	Ice engineering, environmental engineering remote sensing, geophysics, meteorology, climatology, ecology, geology	National

Information Analysis Centers	FY 1995	FY 1996
Soil Mechanics	$ 60,000	$70,000
Concrete Technology	60,000	70,000
Coastal Engineering	60,000	70,000
Hydraulic Engineering	60,000	70,000
Cold Regions Engineering	60,000	70,000
	$300,000	$350,000

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Scientific and Technical Information Centers (Cont'd)

COORDINATION: The Scientific and Technical Information Centers (as well as Corps Laboratories, and Division and District offices) distribute reports, abstracts and other scientific and technical information to the Defense Technical Information Center (DTIC), the origin library, and the HQUSACE library, to ensure wide circulation and availability. Reports are available for searching throughout the Corps through the Corps Library Program's computer system, LS/2000. DTIC publicizes reports through its own DOD database and forwards the reports to the National Technical Information Service (NTIS), Department of Commerce.

NTIS places the reports into a compendia of Selected Water Resources Abstracts and an annual cumulative edition, with conveniently-indexed and cross-referenced identification of what is being or has been done in water resources research and related scientific and engineering fields, and by whom, where, and when.

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APPROPRIATION TITLE: General Investigations, FY 1996

2. Collection and Study of Basic Data

c. Other Programs

(6) Coastal Field Data Collection

SCOPE: The nationwide program is designed to systematically acquire and assemble information required to accomplish the Corps' mission in coastal navigation, storm protection, design, construction, operation, maintenance, and comprehensive regional and local coastal planning. Cost–effective mission accomplishment requires long–term data that encompasses winds, waves, currents, water levels, historic trends in shoreline position, variability in beach profile and bottom configuration, sediment characteristics, and geomorphologic data. These data are either unavailable in existing archives, are of uncertain or poor quality, or are too sparsely distributed temporally and/or spatially to have statistical viability. The required data are regional in nature and not properly chargeable to authorized projects. Sufficient time is not available prior to or during project preauthorization planning studies to accumulate the years of base–line data necessary for adequate assessment of technical, economic, and environmental feasibility. Acquisition of the information will be accomplished through the concurrent accumulation of complementary items each of which is unique and contributes certain critically needed data. The program is organized into four subitems: (1) wave information studies; (2) wave gaging; (3) beach and nearshore data; and (4) information management.

SUMMARIZED FINANCIAL DATA:

Estimated five year (FY 1996–2000) Program cost	22,000,000
Allocation Requested for FY 1996	4,000,000
Balance to Complete Five–Year Program after FY 1996	18,000,000
Allocation for FY 1995	3,950,000
Increase of FY 1996 over FY 1995	50,000
Average Annual Allocation for FY 1991–1995	$ 3,518,000

JUSTIFICATION:

1. Wave Information Studies. Numerical simulation techniques are used to estimate wave environments, including direction, from weather information. Most wave gage data are non–directional; hindcast data provides 30–37 year directional wave statistics.

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This information is paramount to the functional/structural design and economic evaluation of coastal projects. Additionally, detailed wind information is produced. These data are made available to Corps of Engineers Districts (in addition to reports) through a computerized coastal engineering data retrieval system, from which most statistical representations desired of waves and water levels can be obtained. Funding required is $600,000.

2. Wave Gaging. High-quality wave data are needed to predict harbor shoaling, harbor oscillation, jetty stabilization, beach erosion, etc. These data are imperative to operational guidance for dredging, navigation, maintenance, etc. Upon acquisition, these data are analyzed and made available to Corps engineers, planners, and managers via computer terminals and annual reports. These efforts are coordinated with the National Oceanic and Atmospheric Administration (NOAA), and the data are made available to NOAA and the public. Cooperative agreements for the collection of wave data have been executed with the states of California, Alaska, Florida, Hawaii, Washington, Texas, and Virginia. These agreements provide a mechanism for other Federal, state, and local agencies to cooperate in the collection of coastal data. Funds in the amount of $2,300,000 will be needed to continue wave gaging networks on all U.S. coastlines.

3. Beach and Nearshore Data. An historical record of past episodic events provides the best prediction of future occurrences. The objective of the effort is to provide the quantity and quality of timely data required to accurately document characteristics and effects of episodic coastal events such as severe extratropical storms, hurricanes, tsunamis, etc. Measurements of storm-induced beach, dune, and nearshore profile changes are necessary to quantify erosion and storm damage. Correlation of these data with local wave and water level data is required for the design of coastal navigation and storm protection projects. A cooperative effort involving FEMA, USGS, and NOAA is underway to develop a national plan for interagency cooperation for coastal storm data acquisition. In cooperation with NOAA five open coast tide stations were hardened so that they will survive severe coastal storms. Wave and tide stations have been deployed on three oil platforms to obtain information on hurricane waves and surges in the Gulf of Mexico and a cooperative effort with the NOAA Pacific Marine Environmental Laboratory will measure tsunami waves in the nearshore zone. Funds in the amount of $700,000 are needed to collect beach and nearshore data and continue the data collection for episodic events.

4. Information Management. This task objective is to make coastal data readily available to Corps Districts and Divisions. A standardized data base is being develop so that coastal data formats and analysis procedures are compatible throughout the Corps of Engineers. The value of program data and project-related data is maximized through the use of Corps-wide standards, routine publication of available data (and/or data sources), utilization of a centralized data library, and maintenance of the Coastal Engineering Data Retrieval System. Principal forms of output are information reports, data resource reports, and computer-based data files. The standardized procedures will help avoid intra-agency duplication, minimize data collection efforts, and identify data deficiencies. Funding required is $400,000.

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ACCOMPLISHMENTS: The wave information study has resulted in 37 years of simulated directional wave data for the Atlantic and Pacific coasts, 30 years for the Gulf coast, and the US shores of the Great Lakes. Thirty years of wind data for the three coasts have also been produced. Joint efforts have been established with the States of California, Alaska, Texas, Florida, Hawaii, Washington, and Virginia for collection of wave data. Wave data have been acquired from CFDC program gages, numerous specific project stations, and from other agencies. An information management system was established to handle the simulated wave data, the gaged wave data, and the surf and nearshore current observation data. User-friendly regional wave data base systems have been developed to provide low cost microcomputer resident capabilities to Districts and Divisions.

PROGRAM ITEM	FY 1995	FY 1996
1. Wave Information	$ 640,000	600,000
2. Wave Gaging	2,300,000	2,300,000
3. Beach and Nearshore Data	710,000	700,000
4. Information Management	300,000	400,000
	$3,950,000	$4,000,000

2. COLLECTION AND STUDY OF BASIC DATA

c. Other Programs (Continued)

(7) Transportation Systems

SCOPE: The Transportation Systems Program is required to support Corps field offices in the accomplishment of navigation project benefit/cost analysis. Planning of waterway and harbor navigation projects requires consideration of benefits and costs within the context of not only the water transportation system, but also the total national transportation system. This centrally managed program is a continuing effort that provides analytical techniques and methods, data bases, reports, and services on a Corps-wide basis. The major purpose of the program is to improve the technical quality and accuracy of navigation planning studies, to improve the long-range project and plan formulation for navigation system improvements, to reduce navigation system operating costs and the costs of feasibility studies. The activities of the program include: (1) develop, maintain and improve transportation systems analysis methodology and data bases for inland and deep draft waterway projects; (2) develop and test methodology and data bases used to implement the regional navigation investment planning system; (3) develop procedures and supporting data bases to allocate deep-draft traffic to various vessel classes by trade route and consistent with world fleet projections, (4) provide consulting assistance to Corps field offices in the implementation of analytical methods and the use of data files.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1996-00) Program Cost	$5,950,000
Tentative allocation for FY 1996	950,000
Balance to Complete Five-year Program after FY 1996	4,700,000
Allocation for FY 1995	1,250,000
Decrease in FY 1996 from FY 1995	300,000
Average Annual Allocation for FY 1991-95	796,000

2. COLLECTION AND STUDY OF BASIC DATA

c. Other Programs

(7) Transportation Systems (Continued)

JUSTIFICATION: The $950,000 requested in FY 1996 for Transportation Systems would be used to update data and analysis used for the investment planning for the inland waterways and the development of planning methods, computerized techniques and associated data bases to support project studies. Specifically, $195,000 would be used to provide vessel operating costs used to estimate transportation cost reduction benefits for any navigation studies; $313,000 would be used to provide forecasts of waterborne traffic of deep and shallow draft navigation projects, $60,000 will be used to provide rail, barge and truck models for use in estimating transportation costs, $235,000 will be used to maintain and update grain, coal and container transportation costs; $50,000 will be used to support development of economic and planning portions of the Deep Draft Risk and Uncertainty Guidance, and $97,000 will be used to coordinate navigation research priorities with the Transportation Research Board and to provide consulting service to the Corps field offices. The funds for investment planning analysis ($300k in FY 95) will be required every other year to continue future phases of this analysis.

ACCOMPLISHMENTS: Systems analysis models and supporting data bases have been developed, field tested and systematically updated to improve project planning efficiency. Incremental improvements are underway to reduce the cost and data requirements. The Systems models for grain and container movements have been updated and tested. An analysis of investment priorities for capacity expansion, correction of condition problems, and small scale capital improvement measures under assumptions of constrained budget ceilings and contributions from the inland waterways trust fund was completed in October 1992. An analysis of investment priorities which integrates condition and capacity and updates base data to 1993 will be completed early in 1995.

2. COLLECTION AND STUDY OF BASIC DATA

c. Other Programs (Continued)

(8) Environmental Data Studies

SCOPE: The Environmental Data Studies program includes the development of environmental data collections and information of a general or regional nature; statistical environmental data summaries of regional or national scope; encouragement and support of field offices in the use of information system technology, including geographic information systems and remote sensing technology, to demonstrate the relationship between project-funded environmental activities with national or regional environmental issues; encouragement and support for attendance to environmental meetings and symposia and the development of written summaries for wide distribution within the Corps; the development of predictive models to structure either programmatic or specific environmental data files to the conceptual needs of engineering and/or planning objectives for economies of cost and time: and the development of information on the overall environmental program of the Corps of Engineers. Environmental data includes biological, physical, and/or cultural resource components, several of which have requirements for periodic reporting on a national basis, some of which are responsive to the needs of international treaties and/or obligations, and some of which are important to understanding the accomplishments of the Corps emerging environmental program. The exchange of data is both intra and interagency involving all concerned Federal agencies, notably the Bureau of Reclamation, the Bureau of Land Management, the Fish and Wildlife Service, the Soil Conservation Service, the Forest Service, the National Marine Fisheries Service, the Environmental Protection Agency, the National Ocean Survey, the National Weather Service, and the Geological Survey. Coordination with State Offices and with independent offices such as the Advisory Council for Historic Preservation is also accomplished.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1996-00) Program Cost	$800,000
Tentative Allocation for FY 1996	160,000
Balance to Complete Five-Year Program after FY 1996	640,000
Allocation for FY 1995	155,000
Increase in FY 1995 above FY 1995	5,000
Average Annual Allocation for FY 1991-95	156,000

APPROPRIATIONS TITLE: General Investigations, FY 1996

2. COLLECTION AND STUDY OF BASIC DATA

c. Other Programs

(8) Environmental Data Studies (Continued)

JUSTIFICATION: Funds in the amount of $160,000 are requested to continue the Environmental Data Studies Program and to produce efficiencies of environmental program costs and management. Funds will be used to support and encourage the sharing of environmental information and data, facilitate the locating of other available and pertinent environmental information and train field personnel in its access and use. The aim is to reduce costs, avoid duplication, improve procedures for complying with environmental statutes, and focus upon environmental issues of national and/or regional significance.

APPROPRIATION TITLE: General Investigations, FY 1996

2. Collection and Study of Basic Data

c. Other Programs

(9) Remote Sensing Systems Support

BACKGROUND: This is a continuing item that supports the overall technology transfer requirement of the Corps Civil Works Program for Remote Sensing systems, which is the responsibility of the Cold Regions Research and Engineering Laboratory (CRREL).

SCOPE: This technology transfer program provides state-of-the-art remote sensing, image processing and data management support to all Corps Civil Works elements involved with water resources management activities, including emergency operations, flood control and navigation, coastal engineering, environmental quality and restoration, natural resources management and regulatory activities. It includes the use of operational satellites and aircraft imaging systems to provide unique capabilities to acquire more comprehensive data in near real-time. These data are then combined with those from ground sensors that measure snow, ice, soil moisture, precipitation and other dynamic variables that change with time, for input into water resource models in near real-time. The range of technology transfer activities provided includes: direct technical assistance to field offices on project-specific problems and issues; on-call, rapid emergency response for remote sensing technical assistance during hurricanes, earthquakes, and other natural disasters and hazardous materials spills; training and technology demonstrations; and transfer of new and emerging remote sensing technologies through such mechanisms as technical and executive notes, Engineering Technical Letters and journal articles.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1996-2000) Program Cost	$2,400,000
Tentative Allocation for FY 1996	400,000
Balance to Complete Five-Year Program after FY 1996	2,000,000
Allocation for FY 1995	300,000
Increase in FY 1996 above FY 1995	100,000

JUSTIFICATION: In support of the Corps ability to respond to natural and emergency conditions in our water and natural resources mission areas, data from remote sensing and image processing systems, when placed into data management systems, assist engineers, planners, operations and maintenance personnel at the Corps field offices on a daily basis to perform their mission responsibilities in a more efficient and effective manner. Requirements for direct technical assistance to the field offices continue to increase as more remote sensing, image processing and data management technologies are developed for watershed/aquatic ecosystem management, wetlands delineations, real-time water control and flood management, long term dredged materials disposal management, oil spill clean-up and hurricane damage assessment and recovery operations.

ACCOMPLISHMENTS IN FY 1995:

1. Continued work on the integration of near real time radar and other dynamic and statistical data into water control and natural resource activities.

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Remote Sensing/Geographic Information System Support (Cont'd)

2. Continued coordination with NASA on the Mission-To-Planet Earth program and potential technology applications to the Corps Civil Works program.

3. Provided technical support for the snowmelt model manual and water control data management report.

4. Participated in various emergency management preparedness exercises, supported the districts in major natural disasters, conducted training courses and technical demonstrations, and coordinated with other Corps laboratories and other Federal agencies on emergency management and data management issues.

APPROPRIATIONS TITLE: General Investigations, FY 1996

2. Collection and Study of Basic Data

c. Other Programs

(10) Flood Damage Data Program - New

SCOPE: The Flood Damage Data Program is required to facilitate the collection and maintenance of basic flood damage data to support Corps field offices in the accomplishment of flood damage and hurricane and storm damage reduction projects and studies. Planning and evaluation of flood and storm damage reduction projects requires knowledge of actual damages caused to various types of properties. The relationships between flood depth, water velocities, debris content, wave height and period, value and type of property, and the amount of damage are essential to making good estimates of the value of projects. The distribution of damages resulting from the various factors involved are needed for the risk analysis framework adopted for water resource studies. Damage data is obtained in some instances when funded studies are ongoing when the damaging event occurs. In most instances when flooding and storm damages occur there are no current studies in the area or other funding mechanism to collect the requisite data to be used in future analysis or to report and record accurately the damages incurred and the environmental factors which caused the damages. Currently no centralized flood damage data maintenance forum exists from which to retrieve basic data for research efforts and for specific project studies. The major purpose of the program is to improve the technical quality and accuracy of flood and storm damage data, to improve the understanding of the interrelationships of the characteristics of flooding on property damage, to improve the long-range project and plan formulation for flood and storm damage reduction projects, and reduce the costs of feasibility studies. The activities of the program include: (1) develop, maintain, and improve flood and storm damage data bases for flood control and hurricane and storm damage reduction projects, (2) conduct actual flood damage surveys immediately following flood and storm events, and (3) provide technical and consulting assistance to Corps field offices in the implementation of damage surveys.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1996-00) Program Costs	$2,500,000
Tentative allocation for FY 1996	500,000
Balance to Complete Five-year Program after FY 1996	2,000,000
Allocation for FY 1995	0
Increase of FY 1996 from FY 1995	+500,000
Average Annual Allocation for FY 1991-95	0

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APPROPRIATIONS TITLE: General Investigations, FY 1996

2. Collection and Studynof Basic Data

c. Other Programs

(10) Flood Damage Data Program (continued)

JUSTIFICATION: The $500,000 requested in FY 1996 for Flood Damage Data would be used to establish a National data base system for reporting and maintenance of flood and storm damage data collected, develop and maintain data collection survey forms, provide consulting assistance for use of survey forms, and collect post flood and storm damage data. Specifically, $70,000 would be used to develop the National flood damage data base; $60,000 would be used to develop and maintain data collection survey forms and provide technical assistance on use of the survey forms; and $370,000 would be used to collect damage data for approximately 10 flood and storm events.

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APPROPRIATIONS TITLE: General Investigations, FY 1996

2. COLLECTION AND STUDY OF BASIC DATA

c. Other Programs (Continued)

(11) Automated Information Systems Support

Allocation for FY 1995 $3,185,000 Tentative Allocation FY 1996 $3,605,000
(Centralized Funding)

The amount of $3,605,000 is requested for Corps of Engineers activities required to support automated information systems.

This funding of Automated Information Systems Support is a continuation of work previously funded by the centralized funding account and is the Civil Works proportional share of these expenses. The Directorate of Civil Works in conjunction with the Directorates of Information Management, Military Programs and Resources Management are examining the management of the Corps' information management resources, and specifically how information management requirements are programmed and controlled. Ultimately, it is believed that the programs and projects which benefit from automated information systems should pay for the costs of development and maintenance. However, at the same time unnecessary administrative and bureaucratic burdens should not be created.

(a) Computer Application in Geotechnical Engineering (CAGE)

General: CAGE work is accomplished by the Waterways Experiment Station (WES). In some cases WES enlists the support of districts that have a desired expertise. HQUSACE as the proponent for this program prepares the budget justification, provides the funds to WES and overseas the development, training and distribution of the final products.

Justification: CAGE is a system providing centralized development, evaluation, and distribution of computer programs for Corps wide use in geotechnical engineering. These programs are applicable in design, construction, and long term monitoring of civil works projects. The development and application of CAGE computer programs benefits design, construction and the operation of civil works projects. For example, the slope stability program developed by this initiative is used by nearly all districts and many Corps contractors. Use of the instrumentation database by several districts since FY 1992 has reduced monthly computer cost. A conservative estimate of savings by districts using the CAGE instrumentation database is $600,000 per year. Emphasis is on microcomputer applications.

Software development under this program is a National benefit and therefore is made available as freeware to districts, contractors and the public.

Budget Request: Funds in the amount of $325,000 are requested for FY 1996 to continue work on major activities consisting of more detailed applications for dam safety information, interface for Computer Aided Drafting and Design (CADD) system and development of CADD design tools, laboratory automation applications, grouting applications, instrumentation data manipulation and display capabilities, Dynamic Discontinuous Deformation Analysis (DDDA), relief wells, rock software, and seepage.

(b) Computer Aided Structural Engineering (CASE)

General: CASE work is accomplished by the Waterways Experiment Station (WES). In some cases WES enlists the support of districts that have a desired expertise. HQUSACE as the proponent for this program prepares the budget justification, provides the funds to WES and overseas the development, training and distribution of the final products.

Justification: The CASE initiative provides computer software for design or evaluation of Corps projects. Representatives of various districts are involved in identifying needs, specifying software capabilities, and testing preliminary versions of CASE products. Over 80 software packages have been developed and 19 software packages are currently under development. As the emphasis on the Corps' mission changes and as new computer hardware becomes available our design engineers need new procedures and computer methods (e.g. risk and reliability analysis, seismic design, etc.) to efficiently carry out our mission. The CASE software products are all project related and all corps offices benefit from the CASE project and long term benefits will continually accrue.

Surveys taken for the past 12+ years indicate that CASE products have been used on a total of over 2,646 structures/projects which resulted in an estimated savings of 1,340 man-years, a net savings of $116 million.

The basic CASE goal is to provide easy access to the programs with readily transferable computer technology. The CASE software is used on PC's with floppy disks distributed by the Waterways Experimental Station.

Budget Request: Funds in the amount of $610,000 are requested for FY 1996 to continue assisting field offices to complete and update CASE computer software products, which are not commercially available, for design of civil projects.

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(c) Geotechnical Aspects of Computer Aided Structural Engineering (GCASE)

General: GCASE work is accomplished by the Waterways Experiment Station (WES). In some cases WES enlists the support of districts that have a desired expertise. HQUSACE as the proponent for this program prepares the budget justification, provides the funds to WES and overseas the development, training and distribution of the final products.

Justification: GCASE is a system that provides a series of computer programs to aid geotechnical and structural engineers in design and evaluation of civil works projects. All software is well documented, maintained and made available as freeware to Corps districts, contractors and the public. Training on the use of this software is also provided. To date 81 final and 7 interim computer programs have been released and 100 published with 73 short courses provided. The last yearly survey indicated that the GCASE and CASE products are used on 2,900 projects/structures resulting in a reduction of 1,400 man-years. Current tasks include stability analysis, finite element analysis for mass concrete structures, computer-aided design and draft, U-frame structures, earth pressures, pile foundations, soil-structure interaction, and arch dams.

Budget Request: Funds in the amount of $125,000 are requested for FY 1996 to continue work on 19 programs and develop new criteria documents related to the current tasks stated in the above justification. GCASE software products are used in various phases of project development and design, feasibility, design and plans and specifications, and major rehabilitation documents.

(d) Pavement Transport Computer Assisted Structural Engineering (PCASE)

Justification: PCASE is a number of computer programs (25 existing programs) for the design and evaluation of airfields and roads according to U. S. Army and Corps of Engineers criteria. PCASE computer programs provide the designer the tool to determine optimum pavement thickness for the design of pavements and transportation systems, and are used as a means of standardization and technology transfer. These programs save the user numerous manhours in timely calculations and production of drawings, reduce project costs and errors, and provides for standardization and is the only design tool available to the design engineer that uses current computer technology.

Budget Request: Funds in the amount of $45,000 are requested for FY 1996 for the Corps' Transportation Systems Center of expertise in Omaha, NE to continue improvements to these computer programs including updating the programs as the technology changes, increase user friendliness, converting to metric and developing new computer programs as requested by the field offices.

(e) Numerical Model Maintenance Program

Justification: Numerical models are used by all Civil Works Divisions and Districts in all phases of activities, i.e., planning, design, engineering, construction, operations and maintenance, across a wide spectrum of project types and sizes. Some models are used on a daily basis for reservoir and other project operations; other programs are used for structural analysis, environmental management, etc. The numerical models provide the Districts with efficient, state-of-the-art tools for all phases of Civil Works activities. In most cases, the models represent capabilities not available from other sources. The use of the models lead directly to better economic and technical assessments in the planning and design stages, enhanced construction operations and reduced completion times, and more effective decision-making in operations and maintenance. Use of the numerical models also results in reliable, cost-effective engineering for the analysis of complex problems and multiple planning scenarios. It is imperative we maintain the most current and accurate models and ensure that they are well documented to facilitate the best field applications. Without maintenance and support funding, the capabilities of the models and information in them will become outdated and unusable, and present annual cost savings/avoidance, conservatively estimated at over $50 million, will not be achieved.

Budget Request: Funds in the amount of $2,500,000 are requested for FY 1996 to continue the maintenance, documentation, correction and/or adjustment, and consultation on the use of numerical models currently in use by the Corps. All six R&D Performing Elements, i.e., the Construction Engineering Research Laboratory (CERL), the Cold Regions Research and Engineering Laboratory (CRREL), the Hydrologic Engineering Center (HEC), the Institute for Water Resources (IWR), the Topographic Engineering Center (TEC), and the Waterways Experiment Station (WES) are involved in maintaining the models at maximum effectiveness by upgrading the models based on field use and the updating of necessary supporting data banks. They also provide limited consultation to the Districts on special cases and assist in adapting models to site specific conditions.

APPROPRIATION TITLE: General Investigations, FY 1996

2. Collection and Study of Basic Data

c. Other Programs

(12) National Spatial Data Infrastructure (NSDI)

BACKGROUND: The National Performance Review recommended that the executive branch develop, in cooperation with State, local, and tribal governments, and the private sector, a coordinated National Spatial Data Infrastructure (NSDI) to support public and private sector application of geospatial data in such areas as transportation, infrastructure, community development, agriculture, emergency response, environmental management, and information technology. By Executive Order (E.O.) 12906 all Federal agencies have been directed to coordinate their geographic data acquisition and access in support of the NSDI. The E.O. directed activities be undertaken by Federal agencies to implement the NSDI. These include establishing and using a national geospatial data clearinghouse, standardizing documentation of data collected, providing public access to data in standard exchange formats, adherence to FGDC standards and Federal Information Processing Standards (FIPS) when developing geospatial data, and contributing to the national digital geospatial data framework.

SCOPE: The Corps Civil Works program in the execution of project development, construction, operation, and maintenance spends approximately $175,000,000 annually for the collection and/or purchase of geospatial data, such as hydrographic surveying of the nation's ports, harbors and waterways to support its navigation mission. Adherence to the E.O. will require considerable corporate level effort as well as site/project specific efforts. Corporate efforts will include: 1) selected technical experts from the laboratories and districts participation in field advisory groups to support HQ in the development of Corps-wide geospatial data policies, practices, and implementation plans to manage the development of the Corps share of the NSDI. This would include activities such as development of support packages including software and training on the use of digital geospatial data library methodologies and use of wide area search and clearinghouse systems and 2) the development of feature codes for all navigation channels and implementation plans to provide channel and hydrographic data to the NSDI framework. All districts, laboratories and separate FOAs will be involved in site/project specific efforts including: 3) building standardized documentation files for new geospatial data sets, 4) implementation planning to build files for existing geospatial data sets, 5) provide standardized documentation files to the clearinghouse via the Internet, and 6) provide public access to new geospatial data sets in standard transfer formats through the Internet and by other means.

National Spatial Data Infrastructure (NSDI) (Cont'd)

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1996-2000) Program Cost	$3,250,000
Tentative Allocation for FY 1996	2,050,000
Balance to Complete Five-Year Program after FY 1996	$1,200,000
Allocation for FY 1995	0
Increase in FY 1996 above FY 1995	+2,050,000
Average Annual Allocation for FY 1991-1995	0

The FY 1996 request includes $300,000 for experts from the laboratories and districts to participate in field advisory groups to support HQ in the development of Corps-wide geospatial data policies, practices, feature codes for all Corps navigation channels, and implementation plans to provide channel and hydrographic data to the NSDI framework. $1,750,000 is included for site/project specific efforts to organize Corps geospatial data so that it will contribute to the NSDI. Beginning in FY 1997 this item will include only those laboratory and district activities to ensure conformance with the E.O. and providing coordination of framework data, estimated at $300,000 annually. Site/project specific efforts will be included in individual project budgets.

JUSTIFICATION: Savings to Civil Works projects will be realized by the availability and use geospatial data created by others. With the use of existing data, time and cost will decrease and duplicative data gathering will be eliminated. We will also be able to provide more timely response to emergencies by quickly locating and accessing required data. This was demonstrated during Hurrican Andrew recovery operations. Having Civil Works geospatial data in standard formats, notifying others of its content (standardized documentation), and making it available to others will save millions of dollars due to reduced duplication of efforts among the Federal, State and local governments and the private sector in the collection and distribution of geospatial data. By implementing E.O. 12906, a useful inventory of our geospatial data holdings will be available for project use.

ACCOMPLISHMENTS IN FY 1995: (using General Expenses funds)

1. Building standardized documentation files and other activities that were funded from technical overhead accounts.

2. Developed an inventory of USACE geospatial data holdings.

3. Became a node on the National Geospatial Data Clearinghouse.

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APPROPRIATION TITLE: General Investigation, FY 1996

3. Research and Development

The R&D program seeks the timely and cost-effective solution to high priority problems encountered within the overall Civil Works Program which serves the entire array of beneficial purposes of water and related resources development and management. The scope of the R&D program includes: flood control and damage mitigation by means of dams and reservoirs, levees and floodwalls, channel improvements and diversions, and improved flood plain management procedures and practices; waterborne transportation including harbors, channels, canals, inland, Great Lakes, intracoastal, and coastal waterway improvements for commercial and recreational navigation; and hydropower systems, including pumped storage facilities. Further, it seeks solutions to problems encountered in erosion control and shore protection, including protection and restoration of coastal and Great Lakes shores and beaches, and rivers channel and bank stabilization; water-oriented recreation; and preservation of fish, wildlife, aesthetic, water quality, cultural, and other environmental values.

The R&D effort underpins the Civil Works program by improving the Corps of Engineers capability to accomplish its water resources mission and program with optimum effectiveness, economy, and safety, and with serious concern for protection and/or restoration of environmental values. It is formulated to address priority problems that significantly constrain execution of the existing Civil Works workload, or that are envisaged as that mission and the mix of activities change in response to emerging needs. Some of these evolve from new Executive Orders, legislative requirements levied through other agencies, and regulatory standards imposed against projects constructed prior to establishment of such standards. The Civil Works research program is strongly addressing problems generated by the emphasis on comprehensive planning and concern for mitigation of environmental impact.

If the Corps is to take advantage of rapidly developing technologies and techniques which offer the possibility of significant monetary savings and greater reliability, safety, and overall effectiveness, it must pursue an aggressive R&D effort. The added complexities of environmental and social considerations, energy conservation, and the mounting concern with urban problems necessitate, more than ever, increased emphasis on new approaches and methods. The request for $25,000,000 of General Investigations funds for the FY 1996 program would accomplish only the highest priority R&D needs. This is a decrease of $900,000 from FY 1995.

The R&D effort is a highly applied effort, utilizing in part products and techniques developed by industry and universities, and adapting them to Civil Works needs. This R&D effort is essentially a "problem solving" process by which the Corps systematically examines new ideas, approaches, and techniques, with a view toward improving the efficiency of its planning, design, construction, operations, and maintenance activities. Results of this work will be incorporated into revisions or additions to Engineer Manuals, Engineer Technical Letters, Guide Specifications, Engineer Circulars, Laboratory Technical Reports, and other means of technology transfer. In considering the Civil Works R&D program against the background of the overall mission it supports, it should be noted that this mission is the most widespread and varied of the several Federal water resources programs. Yet in comparison to many other Federal agencies and private industry, the Corps of Engineers spends very little on R&D.

The Corps manages and conducts Civil Works R&D through its four research centers: the Cold Regions Research and Engineering Laboratory (CRREL) at Hanover, NH; the Construction Engineering Research Laboratory (CERL) at Champaign, IL; the Waterways Experiment Station (WES) at Vicksburg, MS; and the Engineer Topographic Laboratories (ETL) at Fort Belvoir, VA. Some elements of Civil Works R&D are also assigned to the Corps Institute for Water Resources at Fort Belvoir, VA and the Hydrologic Engineering Center at Davis, CA. Approximately sixty-five percent of the current research effort is accomplished in-house and the remainder is done under contract by universities or private firms.

COORDINATION: Corps representatives attended the Biennial Interagency Research Coordination Conference hosted by the Tennessee Valley Authority (TVA), in October 1993. This biennial series has proven to be the most effective single mechanism for interagency coordination to exchange information and eliminate undesirable overlap and duplication of research in engineering fields relating to water resources development. In addition to the primary involvement of the TVA, Bureau of Reclamation, Bonneville Power Administration, and the Corps as the four "member agencies", several other agencies, including the Soil Conservation Service and the Bureau of Mines, contribute. At the conference, the research of each participating agency in several specialized technical fields was examined by the applicable principal researchers, and desirable adjustments in programs and projects were made. In between the biennial conferences, working groups in the various disciplines and program areas meet to report progress and coordinate activities. Corps researchers are in continuous close contact with NOAA, USGS, USCG, NASA, U.S. Nuclear Regulatory Commission, U.S. Navy, concerning the civil works missions.

Interagency coordination on remote sensing techniques is accomplished through various continuing and ad hoc groups, including: the Civil Land Satellite Program Board; the LANDSAT Interagency Program Board; and working groups established periodically to address technical or policy issues. Corps representatives, attending professional conferences, symposia, seminars, and workshops in their particular specialties (including the annual Army Science Conference held at West Point, NY, and the Joint Services Civil Engineering Research and Development Coordinating Group) present papers on specific research findings; informally exchange views, experience and expertise; and renew, reinforce, and expand highly desirable technical communication between active practitioners in the various components of the national and international research community. Corps researchers maintain continuing contact with the research activities of universities and industry through regular membership in such organizations as the American Society of Civil Engineers, the American Concrete Institute, the American Society for Testing and Materials, the International Conference on Coastal Engineering, the American Association of Port Authorities, the Coastal Society, the Offshore Technology Conference, International Society of Soil Mechanics and Foundation Engineering, U.S. and International Committees on Large Dams, the Permanent International Association of Navigation Congresses, and other organizations; assignment to and participation in their various committees, including chairmanship of many of them; and review of reports on research and other presentations contained in the proceeding, journals, and other publications of these organizations and their technical committees. Another activity which provides a good foundation for coordination is the operation of the five Corps Scientific and Technical Information Centers (Soils Mechanics, Concrete Technology, Coastal Engineering, Hydraulic Engineering, and Cold Regions). Each of these centers acquires, examines evaluates, and disseminates newly published and unpublished scientific and technical information generated within the U.S. and abroad.

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General Investigation, FY 1996 (Cont'd.)

SUMMARIZED FINANCIAL DATA

Estimated Five Year (FY 1996-FY 2000) Program Cost	$139,000,000
Tentative Allocation for FY96	25,000,000
Balance to Complete Five Year Program after FY96	114,000,000
Allocation for FY95	25,900,000
Decrease of FY96 from FY95	-900,000
Average Annual Allocation for FY91-FY95	22,100,000

CURRENT RESEARCH EFFORT: The proposed FY96 R&D Program has been restructured to more accurately reflect the anticipated technological emphasis and requirements of the Civil Works Program during the next five-year planning period, and, in turn, for more effective R&D Program management. Major areas of restructuring include combining on-going R&D programs supporting the diverse environmental requirements of the CW program into an overall Environmental Quality Research Area. This was necessary to more accurately portray the extreme diversity of this R&D effort and the extent of the Corps funding support for applied environmental quality research. A change in name of the Materials Research Area to that of Materials/Structural Engineering Research Area to more accurately portray the scope of this effort and the Corps increasing interest in composites and other high performance construction materials for project construction, rehabilitation, and project retrofitting within areas of seismic concern. Also, an expanded Surveying/Remote Sensing Research Area to fully explore and develop cost-effective Corps management tools based on such rapidly expanding technologies as GIS, Differential Global Positioning Systems, air-borne lazer surveying systems and the planned development of several new earth-orbiting remote data collection sensors.

This R&D Program now includes seven major research focus areas and two special interest areas, as listed below:

* Materials/Structural Engineering: Includes specific R&D programs on Soils, Rock, Concrete, Structural Engineering and Electrical/Mechanical Engineering.

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General Investigation, FY 1996 (Cont'd.)

* Coastal Engineering: Includes specific R&D programs on Coastal Flooding and Storm Protection; Harbor Entrances and Coastal Channels; Shore Protection and Restoration: Coastal Structure Evaluation and Design; and Coastal Geology and Geotechnical considerations.

* Flood Control and Navigation: Includes specific R&D programs on Flood Control Structures; Navigation Hydraulics; Hydrologic Engineering; Water Resources of Cold Regions; Ice Engineering; and Flood Channels.

Environmental Quality: Includes specific R&D programs on Natural Resources Management; Long-Term Effects of Dredging Operations; Water Quality Assessment and Management; and Environmental Impact Research.

* Water Resources Planning Methodologies: Includes specific research on Improved Planning Methodologies and advancements in Program and Project Management Techniques.

* Surveying/Remote Sensing: Includes specific R&D programs on Surveying and Mapping; and Remote Sensing.

* Construction, Operations and Maintenance. Includes specific Research on Improvements of Operations and Management Techniques.

Special Interest R&D Programs include:

* Construction Productivity Advancement Research (CPAR), authorized by WRDA 1988.

* Risk Analysis for Water Resources Investments Program.

General Investigation, FY 1996 (Cont'd.)

	RESEARCH AREA	FY 1995 ALLOCATION	FY 1996 TENTATIVE ALLOCATION
1.	Materials/Structural Engineering	$ 3,100,000	$ 3,100,000
2.	Coastal Engineering	6,150,000	6,200,000
3.	Flood Control and Navigation	5,400,000	5,400,000
4.	Environmental Quality	5,650,000	4,800,000
5.	Water Resource Planning Studies	900,000	1,000,000
6.	Surveying & Remote Sensing	2,000,000	1,900,000
7.	Construction, Operations and Maintenance	1,100,000	1,100,000
8.	Risk Analysis for Water Resource Investments	1,600,000	1,500,000
		$25,900,000	$25,000,000

MATERIALS/STRUCTURAL ENGINEERING

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY 1996-2000) Program Cost	$17,900,000
Tentative Allocation for FY 1996	3,100,000
Balance to Complete Five-Year Program after FY 1996	14,800,000
Allocation for FY 1995	3,100,000
Increase of FY 1996 over FY 1995	0
Average Annual Allocation for FY 1991-1995	2,700,000

FY 1996 ACTIVITY

Studies will be performed to define the characteristics, performance, and interaction of materials, both natural and manufactured, that are of importance to the construction, operation, and maintenance of civil projects. These studies involve consideration of the adequacy of water resources structures with respect to safety against aging and hydraulic forces; enhancement of structural durability by innovative use of high-performance construction materials; and improved techniques for design and testing of such structures. Additionally, these studies will place primary emphasis on developing computerized structural engineering design and analysis tools for Corps' field offices. New analysis procedures have been and will be developed in computer-aided structural engineering, soil-structure interaction, cellular cofferdams, nonlinear incremented structural analysis, floating breakwaters, and foundation enhancement and exploration.

1. The geotechnical research area will continue to develop dual use technology with major emphasis on the safety of dams, levees, embankments, and foundations. For example, our numerical modeling technologies for the design/evaluation of natural and man-made structures have been and will continue to be the cutting edge of the state-of-the-art. Improvements are being made in predicting subsurface conditions in difficult geologic settings using the drilling parameter recorder. There is continued development of testing and analytical technology for determining engineering properties of soils containing large rock particles; continued development of methods based on experiments rather than empirical (judgment and experience) criteria for interpreting rapid economical in situ tests such as penetrometer tests; development of technology for analysis of problems involving large deformations which cannot be analyzed properly using current technology; continued development of procedures and apparatus to improve consistency and reliability of direct shear testing of rock.

Materials (Cont'd)

2. The Concrete Research Program integrates materials science, engineering mechanics, and construction methodology to develop economical concrete technology which improves the durability, service life, and safety of concrete structures. Some examples include the development of state-of-the-art high-performance construction materials technology which will permit the Corps to perform its design and construction activities in a rapid, quality oriented, and cost-effective manner; continued improvement of roller-compacted concrete materials and design technology which will improve long-term durability and reliability, and further lower mass concrete construction costs; and development of materials science analytical tools to optimize the physical properties of civil works concrete.

3. The Structural Engineering Program has developed computer applications, which are presently being used by every Corps office, and have resulted in an estimated savings of over $90,000,000 since 1980. Also, this program continues to support research necessary to develop design tools in the areas of soil-structure interaction, welds, mass concrete, and seismic analysis of concrete dams. This Program emphasizes safety of locks and dams and associated structures. Ongoing R&D includes the development of analyses and design tools for "U" and "W" framed locks, arch dams, pile foundations, and sub-structure and soil-structure interaction techniques.

ACCOMPLISHMENTS IN FY 1995

1. Technology transfer for new more efficient methods in laboratory testing and construction control related to soils containing large particles. The products of this research have dual use (Government and private industry) applications and form the basis for new construction materials testing standards.

2. Completed the analysis of numerical studies designed to provide insight and design guidance on the effects of consolidation of soft soils on the performance of embankments and levees reinforced with geosynthetics or other high-performance construction materials.

3. Fundamental advance achieved in soil mechanics theory which has significantly improved reliability of existing analytical tools and eliminated a major difficulty in analysis of large deformations in soils. This advance is a key element for analysis of geotechnical problems that until now have required expensive full-scale field studies. Examples include analysis of earthquake-induced soil slope failures or levee failures.

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Materials (Cont'd)

4. Developed guidance on the use of economical in situ penetration tests for evaluating difficult civil engineering problems, such as the safety (stability) of embankments and foundations and trafficability evaluations and hazardous waste site characterization. This guidance has dual use applications.

5. Completed development of 3-D Dynamic Discontinuous Deformation Analysis for evaluation of jetties and other rock structures.

6. Completed theory and initial computerization of the 3-D Manifold Method of Materials Analysis.

7. Developed design for a drilling parameter recorder to be used in geotechnical foundation investigations in difficult geology.

8. Determined the current state of knowledge on the design, construction and durability of a variety of high-performance construction materials; and developed a Corps-wide consensus of where these materials could be most effectively used in civil works structures.

9. Developed methodology for improving the pourability characteristics of lean, mass concrete mixtures and for creating more stable, watertight structures.

10. Developed cost-effective procedures for significantly improving the durability of roller-compacted concrete which will permit its use in virtually any exposure.

11. Completed design procedures for sheet pile retaining walls based on soil-structure interaction principles including the effects of wall fraction.

12. Developed thermal mechanical finite-element modeling of welding procedures and supporting theory for tainter gates hitch connections.

13. Developed a fully integrated nonlinear, incremented structural analyses (NISA) approach for analyzing the behavior of massive concrete structures. These NISA procedures are currently being used for the Olmstead Locks and Dams and have resulted in cost savings of $4 million in construction cost.

COASTAL ENGINEERING

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY 1996-2000) Program Cost	$35,400,000
Allocation Requested for FY 1996	6,200,000
Balance to Complete Five-Year Program After FY 1996	29,200,000
Allocation for FY 1995	6,150,000
Increase of FY 1996 Over FY 1995	50,000
Average Annual Allocation for FY 1991-1995	5,500,000

FY 1996 ACTIVITY

The Corps of Engineers missions require coastal engineering technology in planning, design, construction, operation, and maintenance of projects for coastal flooding and hurricane- and storm-damage reduction, shore protection and restoration, harbors and channels for large, ocean-going vessels for coastal and international commerce, harbors and channels for small craft for commercial and recreational fishing, and coastal structures built for navigation, flood control, and shore protection. In supporting these essential missions, the Coastal Engineering Research and Development Program develops engineering tools and guidance to plan, design, build, and maintain coastal navigation, shore protection, and coastal flooding projects. Techniques, equipment, and procedures are developed for determining or predicting waves, currents, water levels, and sediment transport on the open coast and in lakes and harbors and their effects on shores and protective structures. Major thrusts to improve methodologies and designs and minimize costs of planning, construction, operation, and maintenance functions are:

1. Development of numerical models to predict effects of structures on sediment transport and shorelines.

2. Development of instruments for measuring sediment transport.

3. Development of a framework for standardized Corps beachfill project planning and design.

4. Development of methods to estimate coastal wave conditions for design and engineering of coastal structures.

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Coastal Engineering (Cont'd.)

5. Development of design guidance for breakwaters and jetties.

6. Development of procedures to optimize the design of revetments and seawalls.

7. Collection and study of wave, current, water level, and beach response data for use in validating models of coastal phenomena so that project design will be based on accurate estimates of forces and design conditions.

8. Development of a model system for simulating coastal processes on a regional basis to predict effects of Corps projects on adjacent areas.

9. Development of a three-dimensional beach change model.

10. Design, construction, and testing of a large-scale laboratory facility to develop robust longshore sediment transport relationships for use in all levels of coastal project design.

11. Development of a method for identifying closure depth for improved sediment budget computations and beach fill designs.

12. Development of an integrated modular modeling system for coastal engineering applications.

13. Development of guidance for selection of improved techniques of stone placement.

14. Development of a procedure for concrete armor unit design.

15. Development of technical input to the Coastal Engineering Manual (CEM), a state-of-the-art manual which incorporates all the tools and procedures used in planning, design, construction, and maintenance of coastal projects.

16. Collection of data to identify effects of seawalls on beaches.

17. Development of risk-based techniques for coastal structure design.

18. Development of improved model with visualization capabilities for harbor design and evaluation.

19. Development of generalized guidance for design of spur jetties.

20. Exploration of innovative and cost-effective coastal erosion technologies.

ACCOMPLISHMENTS IN FY 1995

1. Completed major field experiment to develop, test, and improve theories for nearshore dynamics and sediment transport.

2. Provided improved validation of major CE wave models for wave transformation.

3. Analyzed high resolution wave array data for Pacific coast problems.

4. Documented criteria for incorporating wave grouping effects on structural stability.

5. Tested advanced electronic sensors for measuring sediment transport.

6. Continued planning for major interagency experiment on sediment transport and beach dynamics.

7. Documented method to predict winds in coastal areas for engineering studies.

8. Collected sediment transport measurements across the surf zone during storms for the first time.

9. Completed fourth major part of CEM on "Coastal Structural Design."

10. Developed numerical model for design of dolos armor units used to protect breakwaters subject to large waves.

FLOOD CONTROL AND NAVIGATION

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY 1996-2000) Program Cost	$31,100,000
Tentative Allocation for FY 1996	5,400,000
Balance to Complete Five-Year Program after FY 1996	25,700,000
Allocation for FY 1995	5,400,000
Increase of FY 1996 over FY 1995	0
Average Annual Allocation for FY 1991-1995	4,300,000

FY 1996 ACTIVITY

This research area is concerned with improving cost-effectiveness in design and construction of engineering works for flood control, navigation, and related purposes, including channels and canals, locks and dams, levees and floodwalls, channel and bank stabilization, diversion structures, pumping stations, and hydropower plants. It also includes research efforts on cost shared hydrologic analysis, ice engineering and water quality. Some examples of current activities to improve methods and designs and to minimize costs of planning, design, and construction functions are:

1. Complete development of design guidance for toe and end sections in riprap stabilization measures used in flood control channels.

2. Complete development of design guidance for weir geometry of grade control structures designed to match selected upstream water surface elevations for channel stability.

3. Complete development of guidance for debris control techniques at hydraulic structures to prevent serious operational problems and threats to structural integrity.

4. Continue development of guidance for determining vessel generated forces in navigation channels from propellers and due to maneuvering vessels.

5. Continue development of design guidance for shallow-draft coastal ports relative to vessel characteristics including commercial lobster and shrimp boats.

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Flood Control and Navigation (Cont'd)

6. Provide guidance on hydraulic data refinements required to conduct ship simulator studies for navigation channel design.

7. Continue development of design guidance to determine the minimum required clearance between the bottom of a vessel and the navigation channel for safe navigation at the minimum cost.

8. Complete development of design guidance on bend-way weir design in shallow-draft navigation channels.

9. Continue development of techniques to predict bankline migration and planform response to channel modification for use in the design of local flood protection or channel restoration project.

10. Continue development of design guidance for sedimentation basins.

11. Project deployment and assessment of a low-cost ice breakup control structure.

12. Continue development of forecasting techniques for river ice formation and breakup, and for ice jam formation and severity.

13. Complete tests on ice shearing action on riprap to improve design guidance.

ACCOMPLISHMENTS IN FY 1995

1. Completed development of design guidance for flow diversion structures used in flood control channels.

2. Provided interim guidance for alternatives to riprap for streambank protection where insufficient riprap source, limited right-of-way, environmental concerns, and high cost, make riprap use impractical.

3. Completed development of design guidance for overflow spillways that are shaped to function at maximum efficiency thus requiring a shorter crest length to pass the design discharge.

Flood Control and Navigation (Cont'd)

4. Provided interim guidance for design of rating-fitted grade control structures, lateral flow diversion structures, and riprap stabilization measures used in flood control channels.

5. Provided guidance on predicting currents created by vessel passage.

6. Provided interim guidance on bendway weir design in shallow-draft navigation channels to include spacing and angle.

7. Provided interim design guidance of sedimentation basins.

8. Developed an ice jam database available to Corps Districts in support of ice jam flooding studies.

9. Completed demonstration of a technique for bed scour monitoring during ice events.

10. Completed test version of River Analysis System and distributed to the field users for evaluation.

11. Released unsteady flow analysis program, UNET, to the field.

12. Identified and quantified snowmelt runoff modeling deficiencies using the HEC-1 and SSAR models in New England Watersheds.

13. Prepared technical guidance on the new snowmelt hydrograph separation techniques (isotopic & chemical) for use by Corps field personnel use.

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ENVIRONMENTAL QUALITY

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY 1996-2000) Program Cost	$27,400,000
Tentative Allocation for FY 1996	4,800,000
Balance to Complete Five-Year Program after FY 1996	22,600,000
Allocation for FY 1995	5,650,000
Decrease of FY 1996 from FY 1995	-850,000
Average Annual Allocation for FY 1991-1995	4,200,000

FY 1996 ACTIVITY

The Environmental Quality Research Area is concerned with how all aspects of the Corps activities--planning, regulation, construction, operations, and maintenance--impact on the environment, water quality, and natural resources. It includes research into environmental impact methodologies, wetlands, the long-term effects of dredging operations, natural resources stewardship, and water quality protection. Specific research tasks include developing, verifying, and demonstrating environmental impact prediction and assessment techniques; developing and demonstrating practical engineering and resource management strategies; developing methods to protect and manage threatened and endangered species; developing new and innovative technologies for delineating, evaluating, restoring, creating, and protecting our Nation's wetland resources; developing tools and procedures to identify, assess, and manage contaminated sediments from Corps Civil Works dredging; providing state-of-the-art, cost-effective technologies for managing natural resources and recreation facilities at Corps projects; and providing guidance and new methods for solving project-related water quality problems. Some examples of these tasks are:

1. Develop an understanding of the distribution and life history of sturgeon species to determine if they are impacted by Corps activities.

2. Develop and demonstrate low-cost bioengineering concepts for streambank erosion control.

3. Provide guidance on selecting, installing, and maintaining vegetation in and along flood control channels that maximize habitat quality while ensuring channel stability.

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Environmental Quality (Cont'd)

4. Determine the effectiveness of new technology in providing accurate, rapid, and cost-effective assessments of aquatic habitats.

5. Continue development and field testing of the Hydrogeomorphic Classification System for wetlands evaluation.

6. Continue development of new and innovative engineering techniques for wetlands restoration, creation, and evaluation.

7. Continue study of wetlands critical processes to support wetlands restoration, creation, delineation, and evaluation.

8. Conduct field verification testing of the chronic/sublethal laboratory bioassay.

9. Develop interpretative guidance input for the Environmental Protection Agency/Corps of Engineers (EPA/CE) National Management Strategy for Dioxin-Contaminated sediment.

10. Refine guidance on nonpolar organic contaminants in sediment and suspended material with regard to effects on aquatic organisms.

11. Direct programmatic input to the development of the EPA/CE Inland Testing Manual for dredged material disposal.

12. Provide continued technical guidance on using the national bioaccumulation database initiated in the electronic Contaminants Bulletin Board System.

13. Prepare procedures to develop and implement customer service plans at Corps projects.

14. Determine and manage the effects of recreation user fee programs.

15. Develop procedures to assess and manage significant natural and recreation resources.

16. Measure the economic impacts of dispersed recreation activities at Corps projects.

Environmental Quality (Cont'd)

17. Develop relationships to describe the fundamental processes affecting water quality and the biotic structure of aquatic systems, particularly as they relate to assessment and management issues.

18. Develop assessment capabilities by incorporating current technology developments and utilizing this technology for managing Corps water resource projects.

19. Provide capability to accurately and efficiently integrate environmental and water quality considerations with other project purposes.

ACCOMPLISHMENTS IN FY 1995

1. Provided guidance to Corps field personnel on the costs and benefits of various mitigation measures in aquatic habitats, including artificial reef development.

2. Developed and tested a technique for assessing the benefits of stream channel modifications for aquatic habitats in tailwaters and local flood control channels.

3. Completed all sections (95) of the Corps' comprehensive wildlife management manual, already a widely used document within the Corps and numerous other agencies.

4. Field tested and developed techniques for using the Hydrogeomorphic Classification System.

WATER RESOURCES PLANNING

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY 1996-2000) Program Cost	$5,600,000
Tentative Allocation for FY 1996	1,000,000
Balance to Complete Five-Year Program after FY 1996	4,600,000
Allocation for FY 1995	900,000
Increase of FY 1996 over FY 1995	100,000
Average Annual Allocation for FY 1990-1995	1,100,000

JUSTIFICATION:

The Water Resources Planning Studies Research Area includes research and development activities leading to improvements in the methods which provide the conceptual basis for how Civil Works planning investigations are conducted and the analytical planning tools and project management techniques needed to implement those concepts. Research activities carried out within the planning methodologies research program involve integration of environmental, engineering, and social sciences to develop planning methods that enable the Corps to make sound decisions about water resources investments. Specific research studies range from methods for facilitating public involvement in water resources planning to development of mathematical models and evaluation frameworks for formulating flood damage reduction projects. The basic objectives of the program are to increase the knowledge and understanding of the physical, economic, social and environmental relationships inherent in planning for the development of the Nation's water resources and to develop procedures for incorporating this knowledge into the planning process in a way that provides better professional, public and governmental decisions without increasing planning costs or time. The program is continuous, but its specific focus at any given time is dictated by problems and needs resulting from changes occasioned by legislative mandates such as WRDA 86 and subsequent WRDAs and revisions in broad Federal guidance for water resources planning.

A second research focus within the Water Resources Planning Research Area is research on advancement of Program and Project Management techniques. A major focus of program management research will be to explore techniques and processes to make the overall budget process more efficient. Project Management (PM) philosophy has become the primary vehicle for managing the Corps of Engineers project delivery process. The Corps' PM system functions in a unique environment adopted for the USACE organization structure and Civil Works

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processes. With a strong technical orientation and team/partnering perspective, it embodies many facets not typically found in other organizations which employ standard modern day PM techniques. Consequently the application of generalized PM tools and techniques which have been developed for private sector applications rarely can be incorporated off the shelf. There is a need to provide Corps PMs with requirements of the Corps environment. This research focus is intended to enhance the effectiveness and efficiency of the practice of project management in the Corps of Engineers.

FY 1996 ACTIVITY:

1. Development of a comprehensive manual for water resources project plan formulation.

2. Development of guidelines for preparing scopes of studies for initial project management plans.

3. Development of econometrics models to measure impact of Corps projects on development and environmental resources.

4. Development of new procedures for formulating and evaluating non-structural flood damage reduction plans including flood plain evacuation.

5. Perform an assessment of the state-of-the-art PM practice and identify Corps PM tool and methods needs.

6. Initiate development of methods for measuring PM effectiveness tailored to Corps needs, derived from earned value computation, as well as other newly emerging alternatives being used by industry.

7. Perform an assessment of the overall CE budget development process and identify management tool and methods needs.

ACCOMPLISHMENTS IN FY 1995:

1. Completed revised National Economic Evaluation procedures manual for urban flood damage reduction projects.

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Water Resources Planning (Cont'd.)

2. Completed draft Water Resources Plan Formulation manual.

3. Completed econometrics model to measure with and without project conditions for coastal protection projects.

4. Initial assessment of alternative evaluation frameworks for non-structural flood damage reduction projects.

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SURVEYING & REMOTE SENSING

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY 1996-2000) Program Cost	$11,100,000
Tentative Allocation for FY 1996	1,900,000
Balance to Complete Five-Year Program after FY 1996	9,200,000
Allocation for FY 1995	2,000,000
Decrease of FY 1996 from FY 1995	100,000
Average Annual Allocation for FY 1991-1995	1,600,000

FY 1996 ACTIVITY

The Surveying and Remote Sensing Research Area includes research, development, testing, and evaluation activities necessary for new technology in satellite remote sensing and surveying and mapping to improve Corps mission performance and minimize costs. The remote sensing portion of this program is designed to explore fully the numerous technical and economic capabilities that are becoming available from satellite, airborne and in situ sensors for cost-effective application to the Corps assisting Resources Mission. Activities to be addressed include consideration of spatial and temporal data element interpretation techniques, data handling, and the contributions of remotely sensed acquired data to water and natural resources planning and management models. The Corps is exploring the use of precise measurement and positioning capabilities to support the dam safety program, hydrographic surveying, and dredge positioning and techniques derived from Army/NASA satellite research and development program. Computer aided drafting and design software to fully interface the Corps surveyor to the CADD systems is also being developed. Research activities in the current program include:

1. Continued software and hardware techniques to integrate remotely sensed data (from numerous satellite and aircraft systems) into Corps hydrologic, environmental and economic models.

2. Developed hydrographic surveying techniques to integrate vector polygon and arc data into CADD and GIS.

3. Complete development of remote sensing techniques to yield precise coastal engineering data.

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4. Developed automated procedures for the integration of in-situ data, hydrologic data and environmental parameters into Corps real-time data storage systems.

ACCOMPLISHMENTS IN FY 1995

1. Developed initial procedures for applying satellite and aircraft data for measuring the characteristics of the snowpack for more timely and accurate prediction of the spring runoff.

2. Developed maximum likelihood/principal component classification technique using spectral data for planning and operation of civil works projects.

3. Developed read/write random access image processing techniques using optical media to store and retrieve information in real time for civil works planning, engineering, and operations activities.

4. Developed transparent network access of spatial and temporal data for Corps' land use planning and mapping requirements.

5. Developed transparent conversion techniques for transferring commercial image formats into Corps compatible files for district applications.

6. Completed evaluation of a new hydrographic survey system using swath bathymetric mapping technology, and new triangulated irregular networks (TIN) volume computation techniques.

7. Distributed software to the field operating activities to assist with data transformation between computer systems, and geodetic datum.

8. Completed evaluation of the use of GPS integrated with aerial photogrammetry.

9. Completed software to utilize advanced volume computation software for dredged material volume applications.

CONSTRUCTION, OPERATIONS AND MAINTENANCE

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY 1996-2000) Program Cost	$6,300,000
Tentative Allocation for FY 1996	1,100,000
Balance to Complete Five-Year Program after FY 1996	5,200,000
Allocation for FY 1995	1,100,000
Increase of FY 1996 over FY 1995	0
Average Annual Allocation for FY 1991-1995	1,000,000

FY 1996 ACTIVITY

The Corps of Engineers mission responsibilities in the field of water resources development include the primary functions of construction and operations and maintenance (O&M) of water resource facilities, including navigation channels, locks, dams, reservoirs, powerhouses, waterways, levees, floodwalls, bridges, roads, recreation facilities, and coastal works. Operating and maintaining these water resource projects consumes the efforts of more than half of Corps Civil Works personnel and an ever-increasing portion of the total Civil Works budget. Although in recent years construction has been decreasing in total volume, it remains a primary Civil Works activity. In order to continue to accomplish these construction and O&M functions in an environment of fiscal and manpower constraints without diminishing serviceability, health, or safety, a broadly-based research effort is urgently needed to provide new or improved methods and techniques to increase efficiency and save manpower and funds while retaining or improving reliability, safety, and overall effectiveness of each projects, giving full consideration to environmental and social considerations. Examples of current activities include:

1. Develop operations and maintenance performance measurement system.

2. Develop methods to integrate project condition indices, performance indicators and incremental economic maintenance.

3. Develop a work function management system enhancement to the operations and maintenance budget process.

4. Develop capability for improved post-construction operations and maintenance estimates.

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Construction, Operations and Maintenance (Cont'd)

ACCOMPLISHMENTS IN FY 1995

1. Developed current year operations, budgeting, and execution tracking for improved operations management technology.

2. Completed the development of resource allocation decision tools for hydropower and navigation operations management technology.

RISK ANALYSIS FOR WATER RESOURCES INVESTMENTS

SUMMARIZED FINANCIAL DATA

Estimated Four-Year (FY 1996-1999) Program Cost	$4,200,000
Tentative Allocation for FY 1996	1,500,000
Balance to Complete Four-Year Program after FY 1996	2,700,000
Allocation for FY 1995	1,600,000
Decrease of FY 1996 from FY 1995	-100,000

JUSTIFICATION:

The Risk Analysis for Water Resources Investments research program includes research and development to improve the techniques and information for making decisions in the planning, operation, and management of the Corps water resources infrastructure. The need for risk-based decision making tools extends across all of the functional areas with the Corps and across all project outputs. Budget constraints, increased partner cost sharing and public concern for project and system performance and reliability requires the development of new methods and analytical techniques. This risk and uncertainty (R&U) information will be used explicitly in decision making. The program includes: (a) research into specific areas of planning, (b) initiation of operations related risk-cost analyses and risk based benefit-cost analysis, and (c) development of R&U methods for engineering evaluations. The fundamental objective of the program is to improve decision-making in the planning, design, operation and management of the Corps' water resources program. The research and development program includes the development and application of risk analysis techniques to a variety of issues and problems faced in the Corps' water resources planning, engineering, design, and operations. The program recognizes the need for coordinated effort across all the functions of planning, engineering, and operations.

FY 1996 ACTIVITIES:

1. Complete development and application of R&U to the determination of levee height and levee reliability incorporating hydrologic, hydraulic, geotechnical, and economic uncertainties.

2. Continue development and application of risk-based methods in the reliability assessment of maintenance dredging useful in both planning and operations and maintenance decisions.

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3. Continue development and expand procedures for analyzing existing project engineering reliabilities and uncertainties in economic performance and for incorporating them into a risk-based benefit-cost analysis framework of major rehabilitation.

4. Continue the development of procedures to evaluate and assess the uncertainties of the engineering and economic performance of coastal protection projects.

5. Continue the development of prototype procedures for incorporating uncertainties in the evaluation of inland navigation system project replacements and improvements.

6. Continue the development of procedures for quantifying and evaluating the uncertainties for deep draft navigation channel improvements.

ACCOMPLISHMENTS IN FY 1995:

1. Revised and refined guidelines for the evaluation of major rehabilitation projects incorporating risk, engineering reliability, economic and environmental considerations.

2. Developed and first tested prototype computer tools for combining the hydrology, hydraulic, geotechnical, and economic uncertainties of flood damage reduction projects.

3. Initiated development of advanced Monte Carlo simulation for quantifying economic uncertainties for flood damage reduction project formulation and evaluation.

4. Extension of advanced prototype Monte Carlo simulation model for major rehabilitation evaluation.

5. Completion of recommendation for risk communication within the Corps and development of executive seminar on the contribution of risk-based analysis and decision making to Corps decisions.

6. Completion of development of analysis framework and computer model for evaluating the risk-cost tradeoffs and economic impacts for maintenance dredging.

7. Completion of computer decision support system (DSS) model and documentation for support of maintenance dredging decisions.

Risk Analysis for Water Resources Investments (Cont'd)

8. Completion of engineering reliability model for timber piles and initiation of reliability model for steel piles.

9. Analysis of changed reliability of steel sections due to corrosion and fatigue over time.

10. Report on framework for reliability model for anchored gravity structures.

11. Completion of final report on methodology for evaluating the uncertainty in the stability of levees.

12. Completion of the contribution and reliability of local flood protection features to project performance.

13. Completion of report and procedures for quantifying the uncertainty in the stage-discharge relationship used for flood damage reduction project formulation and evaluation.

14. Initiated development of prototype procedures for incorporating uncertainties in the evaluation of inland navigation system project replacements and improvements.

15. Initiated development of procedures for quantifying and evaluating the uncertainties for deep draft navigation channel improvements.

16. Initiated development of procedures to assess and combine the uncertainties of the engineering and economic performance of coastal engineering projects.

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APPROPRIATION TITLE: General Investigations, FY 1996

4. Construction Productivity Advancement Research Program

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY 1996-2000) Program Cost	$30,000,000
Allocation Requested for FY 1996	6,000,000
Balance to Complete Five-Year Program after FY 1996	24,000,000
Allocation for FY 1995	6,000,000
Increase of FY 1996 over FY 1995	0
Average Annual Allocation for FY 1991-1995	4,600,000

FY 1996 ACTIVITY

Studies by the National Research Council, the Office of Technology Assessment and others have shown that the U.S. construction industry has historically spent very little for research and development. The construction industry spends less than 0.5 percent of sales on research and development, which is less than any other mature industry spends. The lack of research and development in the construction industry has resulted in decreased productivity, higher construction costs, and a loss of competitiveness by the U.S. construction industry, both at home and abroad. Advancing construction productivity would reduce Federal construction program costs, and projects not now economically feasible might become feasible due to lower construction costs. Cost savings would accrue directly to the Federal Government's construction program as well as benefit the construction industry and the U.S. economy in general. In response to these needs, the Construction Productivity Advancement Research (CPAR) program was authorized in PL 100-676, the Water Resources Development Act of 1988. The purpose of the CPAR program is to develop and rapidly apply state-of-the-art and advanced technology to increase productivity and reduce construction costs.

The Construction Productivity Advancement Research Program is a Corps-Industry cost-shared collaborative research, development, demonstration and commercialization/technology transfer program. Continuation of cost-shared research efforts in each of the following areas is anticipated.

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Construction Productivity Advancement Research (Cont'd)

1. Planning and Design Improvement: Including potential individual research efforts in such topics as computer-aided planning and engineering tools, advanced site investigation technology, knowledge-based cost estimating systems, expert systems/artificial intelligence, total integrated design systems, materials selection systems, and advanced technology selection systems.

2. Improved Construction Site Productivity: Including potential individual research efforts in such topics as automated construction/robotics, expert systems, computer-aided construction management systems, automated inspection and quality control, advanced pavements resurfacing technology, advanced excavating and tunneling, advanced materials handling/recycling systems, advanced environmental compliance systems, improved cold weather construction methods, marine construction, and expedient flood fighting construction.

3. Advanced Materials: Including potential individual research efforts in such topics as high-performance cementitious materials, high-performance masonry systems, geomodifiers and geotextiles, structural rehabilitation materials, advanced fabrication systems, advanced coatings and application systems, improved adhesives and fasteners, new composites including recycled waste materials, and advanced structural polymers and ceramics.

ACCOMPLISHMENTS FOR 1995:

1. Completion of the development and demonstration of a scaffold-mounted electro-mechanical device to assist masons in lifting masonry block and sections, increasing productivity and reducing the potential for back and other lifting injuries.

2. Completion of demonstrated performance and design criteria for the commercialization of a mobile plant using a plasma arc torch system for the on-site destruction and neutralization of asbestos-containing construction and building renovation waste.

3. Completion of demonstrated materials specifications, design guidance and test methods for the use of recycled commingled waste plastics in construction components such as standard board lumber shapes, timber piles and posts, beams, columns and sheathing/flat stock.

4. Completion of demonstrated automated thermal spray systems for field application of metallic corrosion/erosion-resistant coatings to metal surfaces, including a remotely-operated crawler spray applicator and surface preparation and visual inspection subsystems.

Construction Productivity Advancement Research (Cont'd)

5. Completion of a demonstrated material specifications and design and construction guidance for the commercialization of advanced composite cables for use as prestressing reinforcement for concrete waterfront/marine structures, providing for longer life through reduced corrosion damage.

6. Completion of a demonstrated inexpensive, short-term performance test system that can be applied by minimally skilled technicians to determine differences between the design and as-built performance of building heating, ventilating and air conditioner systems, providing a means to correct deficiencies to ensure delivery of energy-efficient buildings.

7. Completion of the development and demonstration of a system for prestressing clay brick walls in the field, requiring minimum training and expertise for use, to improve the performance and extend the application potential of brick load-bearing and veneer walls by permitting the use of thinner walls, elimination of cracking and attendant maintenance requirements, and higher productivity in the construction of the walls.

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APPROPRIATIONS TITLE: General Investigations, FY 1996

5. Economic Impacts of Global Warming

SUMMARIZED FINANCIAL DATA:

Estimated Six-Year (FY 1992-1997) Program Cost	$1,408,000
Tentative Allocation for FY 1996	150,000
Balance to Complete Six-Year Program After FY 1996	150,000
Allocation for FY 1995	150,000
Increase of FY 1996 over FY 1995	0

JUSTIFICATION:

This program is designed to respond to the President's initiative on global warming expressed through the Intergovernmental Panel on Climate Change (IPCC) and AGENDA 21. The purpose of this program is to enable the Corps of Engineers to develop predictive models and evaluation techniques and procedures to better assess the vulnerability of existing water management systems and to enable project analysts to formulate and evaluate cost effective solutions and coordinated response strategies under conditions of climate uncertainty. Methods will also be developed to aid the planning and design of new water management projects as well as for the effective operation and maintenance of existing projects.

FY 1996 ACTIVITIES:

1. Continue with the adaptation of more refined GCM models to sub-continental scale river basin analysis as part of the Federal Interagency GEWEX initiation, focusing on the Missouri River basin, with special emphasis on the economic impact analysis of alternative warming scenarios and operating roles of reservoir system management.

2. Continue the national assessment of water use susceptibility and water system vulnerability.

FY 1995 ACCOMPLISHMENTS:

This was the second phase of the research program and focused on more detailed analyses of the second and third generation meso-scale general circulation models being developed now by NASA and NOAA. The U.S. National Plan of Action will be prepared for adapting to climate change, as part of UNCED AGENDA 21, requiring agency inputs on water resources and coastal

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protection. All studies will be accomplished cooperatively with other funding agencies, including NSF, USGS, NOAA, EPA, OCE, NASA and the Electric Power Research Institute (EPRI).

The first phase of the program enabled the Corps to participate in a wide range of activities and requisite studies that comprise the IPCC program. Essentially, the budget provided the Corps with enough funding to conduct a number of targeted studies on river basin management and shore protection concerning the impacts of potential climate change on the Corps programmatic responsibilities. The funding enabled the Corps to meet its extensive coordination, review, and report writing obligations as co-chair of several working groups of the IPCC, and served to introduce innovative concepts regarding guidelines for assessing climate change impacts and new techniques for analyzing impacts on water resources management and coastal zone management. The Corps was involved in ten other workgroups for which it contributes a considerable amount of technical information. By the end of the first phase of studies, the Corps will have analyzed ten case studies in the U.S. and will have developed a framework for analysis. Accomplishments include:

1. Updated and refined case studies of Missouri River System, Great Lakes, Boston Metropolitan Area, Rio Grande River and Ocean City, Maryland shore protection study using economic evaluation methodology developed in Phase I, coupled with newest General Circulation Model outputs.

2. Collaborated in Federal (GEWEX) Mississippi River Basin case study, focusing on Missouri River basin water management adaptive strategies.

3. Initiated development of economic input-output modeling framework to determine the secondary regional economic consequences of alternative climate change scenarios and water management strategies. Added consideration of aquatic resources (instream flows, habitat, wetlands) to assessment of impact through use of case studies.

4. Completed integrative evaluation and decisionmaking framework for project analysis that is consistent with water resource planning principles and guidelines (P&G).

5. Initiated an assessment of water use susceptibility and water management vulnerability for the 222 hydrologic subbasins of the U.S.

APPROPRIATION TITLE: General Investigations, FY 1996

6. Evaluation of Environmental Investments Research Program

SUMMARIZED FINANCIAL DATA:

Estimated Three Year (FY 1994-FY 1996) Program Cost	$6,000,000
Allocation Requested for FY 1996	2,424,000
Balance to Complete Three Year Program after FY 1996	0
Increase of FY 1996 over FY 1995	424,000

JUSTIFICATION: Throughout the nation, there is an increased awareness of, and concern for, environmentally sustainable development. Within the U.S. Army Corps of Engineers, new authorities are providing more and more opportunities to pursue environmentally oriented projects. This increased emphasis on the environment, however, brings a concomitant need for improved techniques for evaluating and comparing environmental projects and programs. Whether monetary or non-monetary metrics are used, measures of the efficiency and effectiveness of alternative environmental projects and programs are needed to assist in allocating limited resources.

This research program was initiated to provide Corps Field Offices guidance on the following areas: 1) determining and communicating the significance of environmental and social resources; 2) identifying project objectives and measuring environmental and cultural outputs; 3) identifying environmental management measures and their respective cost components; 4) formulating environmental plans; 5) use of cost effective and incremental cost analyses; 6) use of monetary valuation techniques for environmental evaluations; and 8) potential linkages between environmental evaluation and state of the art database management and communication technology. A broader objective of the program is to develop an evaluation framework which will link the above "operational" objectives to the plan formulation and evaluation guidance laid out in the Principles and Guidelines and the evolving Corps Ecosystem Restoration Guidance. A final product of this program will be a series of Environmental Evaluation Procedure Manuals addressing each of the individual work unit areas.

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Evaluation of Environmental Investments Research Program (Cont'd)

FY 1996 ACTIVITIES

1. Development of a user manual and field guidance for determining and communicating environmental significance.

2. Development of guidance for determining environmental objectives and measuring outputs.

3. Development of a cultural resources evaluation model.

4. Development of a procedures manual for environmental plan formulation design and monitoring.

5. Development of a data based decision support system for environmental evaluation.

6. Application and preparation of a demonstration report on the use of non-market evaluation techniques.

7. Final software development and preparation of a procedures manual on the use of automated procedures for cost effectiveness and incremental cost analysis.

8. Preparation of a procedures manual for incorporation of risk and uncertainty analysis in environmental restoration planning.

ACCOMPLISHMENTS IN FY 1995:

1. Draft protocols were developed for determining and communicating the significance of environmental resources.

2. Case study reviews of environmental engineering applications were completed.

3. Automated procedures for cost-effectiveness and incremental cost analysis were field tested.

Evaluation of Environmental Investments Research Program (Cont'd)

4. A national workshop on the linkage between ecological measurement and socio-economic evaluation methods was held.

5. Draft procedures for incorporating risk and uncertainty analyses into environmental evaluation were developed.

6. A workshop was held to conceptualize a draft cultural evaluation model.

7. Case study documentation was completed concerning typical analytical, communication and decision making problems encountered in environmental evaluation studies, both within the Corps and in the Corps interrelationships with other agencies, organizations, local sponsors and the general public.

8. A preliminary data based decision support system was developed for environmental restoration studies.

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APPROPRIATION TITLE: General Investigations, FY 1996

7. EARTHQUAKE ENGINEERING

SUMMARIZED FINANCIAL DATA:

Estimated Seven-Year (FY 1994-2000) Program Cost	$17,000,000
Tentative Allocation for FY 1996	2,500,000
Balance to Complete Seven-Year Program After FY 1996	12,106,000
Allocation for FY 1995	2,000,000
Increase of FY 1996 over FY 1995	500,000

JUSTIFICATION:

In performing the missions of flood control and navigation, the Corps of Engineers has a responsibility to protect the safety of the public from a failure of our facilities and to protect the investment the country has made in building our facilities. The Corps has unique structures - dams, levees, and locks - whose failure would result in severe loss of life and serious impact on the nation's economy. Because these responsibilities and facilities are very specialized, the focused attention needed to ensure good performance cannot be satisfactorily met by the efforts of others agencies. Agencies such as the U.S. Geological Survey and universities provide essential basic research elements; a Corps applied research program is necessary to extend and integrate these elements with in-house work to fully address the Corps problems.

Earthquakes can be disastrous, and their consequences can be intolerable if failure should occur at a major dam, or navigation is stopped on a major waterway, or a levee system collapses causing a flood. These hazards are unique to Corps responsibilities and are not effectively addressed by other agencies engaged in earthquake studies. Proper protective designs are a necessity; however, the knowledge of causes and effects of earthquakes and of suitable protective measures is constantly advancing. New information is being developed throughout the world most notably in this country, Japan, China, Mexico and New Zealand. The problem is to keep Corps practices at the state of the art, both for evaluating earthquake hazards at engineering sites and for providing optimum protective designs. A hands-on program to collect data, establish cognizance, and develop and evaluate advanced methods for design of both new projects and remediation of existing projects is essential.

Additionally, the Corps needs to work with other Federal and state agencies toward expanding the state of the art to be certain that what is developed provides for optimum public safety in major projects, at least cost.

PROBLEM:

In spite of major advances over the last 25 years, serious gaps in our knowledge base still exist in the areas of earthquake hazard predictions, site characterization for seismically sensitive parameters, constitutive behavior and material properties of rock, soils, concrete, and composite (reinforced) materials under seismic loads, and the stress and deformation responses of sites and facilities to seismic loading. Economical remediation and defensive design techniques are needed in addition to careful calibration of fast advancing numerical methods to actual field performance. Part of such calibration includes rapid deployment of investigations to sites of earthquake damage to collect and monitor transient data. In addition, some of these same monitoring techniques can be developed for use in immediate urban search and rescue efforts in damaged areas, a mission of the Corps in the Federal Response Plan. In order to address these issues, the Corps needs a consistent research program which will produce design tools and criteria which incorporate innovative measures for assuring the seismic safety of Corps facilities.

FY 1996 ACTIVITY:

The earthquake engineering research addresses both the geotechnical and structural aspects of water resource facilities. The research program features coordination with and participation by other Federal and state agencies and academic and professional experts in a multi-discipline/multi-agency approach. The FY 1996 activities include:

Geotechnical:

1. Development of improved understanding of earthquake ground motions and their impact on the design of new and remediation of existing water resource facilities. This involves a continuing effort to incorporate the latest advances in seismology and geology in procedures for assessing appropriate ground motions for engineering analyses and construction of a comprehensive ground motion analysis system to prepare the ground motion input for engineering analyses. Efforts will focus on basin response altered by irregular

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boundary effects and construction of accelerogram and response spectra data base modules and accelerogram processing tools.

2. Development of improved methods to determine site characteristics relevant to seismic performance. This effort focuses on geophysical and penetration testing techniques. In the geophysical area, FY 1996 activities will include completing the integration of seismic impedance and crosshole tomography capabilities and performing the first series of field tests. There will also be a continuing effort to update the seismic velocity data base with new data, as available. In the penetration testing effort, activities will include two series of field tests to examine and verify Standard Penetration and Becker Penetration Test correlations and energy and friction corrections for interpretation of test measurements.

3. Development of improved methods to predict material behavior under seismic stresses. This effort involves a combination of physical testing to establish actual seismic material behavior and development of constitutive models for representation of this behavior in numerical dynamic codes. Laboratory tests will be completed to establish the complete stress-strain relationships for soil materials as they approach the liquefied state, liquefy, and then restabilize at large strain levels. A series of centrifuge tests will be performed to examine the validity of currently used overburden corrections to cyclic strength of soils. The centrifuge and laboratory test results will be used to evaluate and calibrate the constitutive model selected in FY 1995.

4. Development of improved capability to predict seismically-induced deformations. This effort involves a combination of centrifuge tests and numerical dynamic code development. The centrifuge tests provide a data base of the seismic response and deformation of full-scale equivalent, complex geotechnical systems. The centrifuge tests will be designed and an initial series of tests will be performed to examine and quantify controlling stratigraphic features that can lead to damaging levels of seismically-induced deformations. Work will also progress in the development/modification of a two- and three-dimensional numerical wave-propagation code that can be used to calculate large deformations. The centrifuge test results will be used to evaluate the modifications to the code.

5. Development of remedial measures to include ground improvement techniques for both new and existing facilities. Results of examination and analysis of competitive remedial

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actions will be used to design a series of centrifuge tests to observe full-scale equivalent seismic performance of remedial actions and to evaluate the adequacy of remedial designs.

Structural:

1. Development of improved understanding of seismic response of concrete dams and development of constitutive models and criteria for design of new and rehabilitation of existing concrete dams. Complete development/modification of nonlinear constitutive models for conventionally-placed and roller compacted concrete materials and begin coding for insertion to numerical dynamic code.

2. Development of improved understanding of the effect of earthquakes on reservoir outlet works and development of models and criteria for the design of new and rehabilitation of existing outlet works. Report the results of physical tests of key components typical of Corps-designed intake towers. Design and perform physical tests to investigate reinforcing details typical of Corps-designed intake towers. Design and perform physical tests to investigate bridge-tower interaction under seismic loads. Design and perform physical tests on key components of other outlet works structures.

3. Development of specialized computer tools for seismic analysis of concrete dams and outlet works. Develop post-processing computer tools to screen finite element analysis results for extent and duration of seismically-induced stress excursions beyond acceptable thresholds. Verify modal stress calculation procedure developed in FY 1995 against example problems and prepare user manual. Complete validation of two-dimensional numerical code with improved constitutive model including crack initiation, propagation and joint opening. Develop and begin validation of the structure-reservoir-foundation interaction features of the numerical code.

ACCOMPLISHMENTS IN FY 1995:

1. Developed guidelines for assigning ground motions for engineering analysis of near-field sites.

2. Completed conceptual design of comprehensive ground motion analysis system and user interface module.

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3. Incorporated seismic velocity data base from the U.S. Bureau of Reclamation in the Corps data base and provided this updated data base to Corps offices.

4. Held workshop to clarify requirements for integration of acoustic impedance and seismic crosshole tomography techniques and to select test sites for establishing correlations of these geophysical measurements to liquefaction potential.

5. Established limiting gravel content criteria for interpretation of Standard Penetration test results in gravelly soils. Completed energy and friction correction study for Becker Penetration tests performed at Success Dam, CA. Designed field tests to be performed in FY 1996.

6. Completed design of centrifuge tests to determine overburden corrections for liquefaction susceptibility analyses. Acquired all materials and instrumentation necessary to conduct these tests in FY 1996.

7. Completed critical review of existing two- and three-dimensional constitutive models for liquefying soil materials and provided recommendations in a report. Critically reviewed validation efforts for these models as well. Selected the best features of these existing models and developed effective stress constitutive equations. Surveyed pre- and post-processing tools and made recommendations.

8. Completed comparison of Newmark-sliding-block analysis results with collection of field case histories. Provided guidance for calibration of analysis results with actual field performance and limits of applicability for a range of field conditions.

9. Completed critical evaluation of existing nonlinear constitutive models that include crack initiation and propagation for conventionally placed concrete materials. Selected the best features of the existing models and formulated improved model for incorporation in numerical code.

10. Completed field sampling and laboratory testing of roller-compacted concrete. Began constitutive model development for this material.

Earthquake Engineering (Cont'd)

11. Completed and reported survey of existing intake towers including key features of their design and past performance during earthquakes. Completed pre-test analysis and physical testing of key components of intake towers.

12. Evaluated current methods for determining ductility of outlet works structures and surveyed remediation techniques in use for other types of structures.

13. In the development of moment/shears/thrust software tools, completed program to screen min/max data from finite element results. Completed interface to graphically portray these results with existing plotting package.

14. In the development of post-processors for finite element time history analyses, developed a modal stress calculation procedure, encoded it, and prepared user manual.

15. Critically surveyed existing two-dimensional codes that can be modified for seismic analysis of complex structure-reservoir-foundation systems, including joint opening. Selected and modified this code and inserted nonlinear constitutive model.

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APPROPRIATIONS TITLE: General Investigations, FY 1996

8. ZEBRA MUSSEL CONTROL STRATEGIES FOR PUBLIC FACILITIES

SUMMARIZED FINANCIAL DATA

Estimated Eight-Year (FY 1992-1999) Program Cost	$12,600,000
Allocation Requested for FY 1996	2,000,000
Balance to Complete Eight-Year Program After FY 1996	6,516,000
Allocation for FY 1995	1,000,000
Increase of FY 1996 over FY 1995	1,000,000

FY 1996 ACTIVITY

The zebra mussel (Dreissena polymorpha), first reported in the United States in 1986, was accidentally introduced from Northern Europe via ballast water from ocean vessels. By 1991, the zebra mussel had spread throughout the Great Lakes into the inland waterways of the Illinois River. It has since spread throughout the Mississippi River Basin down to New Orleans, LA, and west up the Arkansas River near Tulsa, OK. Encrustations of zebra mussels can adversely affect and even shut down raw water intake systems, including those associated with intake and control structures. It has been estimated that this species could cause $5,000,000,000 in damage by the year 2000.

Public Law 101-646, the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, was signed into law on November 29, 1990. It specified that the Assistant Secretary of the Army, Civil Works, "...shall develop a program of research and technology development for the environmentally sound control of zebra mussels in and around public facilities." Thus, the objective of the proposed effort will be the accomplishment of that directive for immediate and rapid implementation.

The research and technology development for zebra mussel control is accomplished in three major task areas.

Task 1. Management, Coordination, and Information Transfer. A host of other organizations (United States Government agencies and foreign government agencies, the hydropower industry, municipal water supply companies, and universities) have begun programs of research and technology development related to the zebra mussel problem. Coordination will be accomplished through yearly working meetings with facility designers

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and operators, an annual conference for information exchange, a Technical Notes publication series, and implementation of a Technical Support Program to assist FOA's in the application of control strategies.

Task 2. Evaluation of Ecological Factors Affecting Zebra Mussel Control Strategies. This task has two components--investigations at selected field sites of early infestation colonization rates in relation to biological and physical variables and secondly, selected laboratory and field studies of zebra mussel biology in relation to control methods. Techniques for assessment and prediction of zebra mussel population growth will be developed to support proactive implementation of control strategies. Natural seasonal shifts in biological indices of zebra mussel condition will be useful for determining the best timing of control attempts.

Task 3. Development of Control Methods and Strategies for Public Facilities. Investigations will be conducted to determine requirements for setting mechanism of attachment, desiccation, thermal tolerance, and susceptibility to low oxygen technologies, including oxidizers (chlorine, ozone, etc.), molluscacides, and anti-foulant coating will be evaluated. Environmental impacts of control technologies will be evaluated.

The development of strategies to apply control methods involves engineering design, operations, and maintenance of facilities and structures as affected by the zebra mussel problem, and will be divided into four areas. Control strategies will be developed and evaluated for a) navigation structures, b) hydropower and other utilities, c) waterborne vessels, including dredges, and d) other water control structures. Potential problems, priorities, and elements for the best available control strategies will be designed for specific facilities and structures through a series of technical workshops. These workshops will include industry and Government representatives selected for their detailed knowledge of the design, operation, and maintenance of particular facilities and structures plus engineers and scientists recognized for their expertise in zebra mussel control research and technology development. Elements of control strategies will include early detection monitoring, preventive options and maintenance, remedial action, re-design options, and seasonal avoidance and minimization.

The benefit of this program of research and technology development is the establishment of proactive, environmental control strategies to minimize adverse effects and fiscal burdens of zebra mussel infestations in and around the Nation's water resource public facilities.

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Zebra Mussel Control Strategies for Public Facilities (Cont'd.)

ACCOMPLISHMENTS IN FY 1995

1. Conducted national conference co-sponsored by TVA, Bureau of Reclamations and American Water Works Association, attended by Federal, State and local agencies, private industry, and municipalities.

2. Conducted four working meetings for evaluation and development of strategies for environmentally compatible and sound measures for zebra mussel control utilizing the assistance of design and operations engineers.

3. Completed and distributed more than 59 Tech Notes to more than 800 subscribers.

4. Provided subscription of New York Sea Grant "Zebra Mussel Clearinghouse Newsletter" to all Corps FOA's.

5. Met with the Zebra Mussel Coordination Committee and chaired session on Inland Waterways for the Fourth International Zebra Mussel Conference in Toronto, CA.

6. Working cooperatively with U. S. Geological Service to track densities of zebra mussels at stream gaging stations.

7. Participated in PBS video documentary on zebra mussel infestation of U. S. waters and Federal R&D programs to address the problem.

8. Completed micro-computer software for risk evaluation of zebra mussel infestation.

9. Develop methods to assess rate of corrosion of metal structures due to zebra mussel attachment.

10. Demonstrate effectiveness of forced air buffer system for control at large surfaces such as bulkheads and lock gates.

11. Developed list of metal paints for prevention of zebra mussels on trash racks and boat hulls.

12. Published information on temperatures and desiccation tolerances of zebra mussels for non-chemical methods on control.

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APPROPRIATION TITLE: General Investigations FY 1996

9. Characterization and Restoration of Wetlands Research

SUMMARIZED FINANCIAL DATA:

Estimated Six-Year (FY 1996-2001) Program Cost	$20,000,000
Allocation Requested for FY 1996	2,000,000
Balance to Complete after FY 1996	18,000,000
Increase of FY 1996 over FY 1995	2,000,000

JUSTIFICATION: The Corps of Engineers, in performing its missions and responsibilities, directly affects wetlands and must consider the effects of its projects relative to the restoration and protection of wetlands. Section 404 of the Clean Water Act and Executive Order 11990 established a need to minimize the destruction, loss or degradation of wetland functions and to preserve and enhance the value of existing wetlands. Relative to project planning, construction, operations and maintenance (primarily dredging) and other Corps activities impacting wetlands, the Corps' needs are diverse. If the Corps is to proactively achieve the environmental protection mandates while accomplishing its more traditional missions, it must be able to incorporate knowledge gained through research conducted by the Corps and others into a sound, logical approach to problem solving at our projects. These needs include improved and cost effective methods, techniques and knowledge bases to a) delineate wetlands and evaluate their functions and value, b) minimize wetland impacts from Corps projects and activities, and c) create and restore wetlands at Corps managed and controlled lands.

The Wetlands Research Program (WRP) FY 91-94 was authorized to begin to address these needs. Due to the relatively short time period for resolving the many complicated ecological issues, the WRP focused on evaluating existing technologies and producing "state-of-the-knowledge" technical guidance documents for Corps field applications. A follow-on program is necessary to: 1) expand critical process research to major wetland types which are potentially impacted by Corps activities not addressed in the WRP, 2) examine new innovative and/or modified technologies and engineering approaches for wetlands protection, restoration, establishment and management, and 3) field, verify and refine technical guidance and technical protocols developed through this research.

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Characterization and Restoration of Wetlands Research (Cont'd)

MAJOR FEATURES OF THE FY 1996 PROGRAM: The purpose of the Characterization and Restoration of Wetlands Research Program is to develop new and verify existing information on the nature, processes and functions of wetlands (natural and man-made) by developing, demonstrating and refining methods, techniques and tools that will provide rapid and broadly applicable benefits to the Corps and the nation. The first year of this 6-yr program will include research initiatives in three major areas:

1. Critical Processes of Wetlands - Research initiated to: a) integrate wetland critical processes into an interdisciplinary ecosystem analysis framework, and b) investigate the relationship between wetland ecosystems and their surrounding landscape.

2. Wetland Delineation & Evaluation - Research initiated to: a) develop a wetlands categorization procedure for allocating resources/protection, b) define/regionalize more rapid identification techniques, and

3. Wetland Restoration and Establishment - Research initiated to: a) develop, evaluate and field test new and innovative technologies and engineering approaches for wetlands protection, restoration and establishment (R&E), and b) develop design criteria for wetland restoration and establishment.

ACCOMPLISHMENTS FOR FY 1995:

This is a new program.

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APPROPRIATION TITLE: General Investigations, FY 1996

10 Geographic Information Systems (GIS) Research Program

BACKGROUND: All Corps districts use a Geographic Information System (GIS), a Computer Aided Drafting and Design (CADD) system, or some other type of automated geospatial data system. While using these systems, the Civil Works program spends approximately $175,000,000 annually to acquire and/or process geospatial data. Recently even more emphasis has been placed on geospatial data related activities and the use of Geographic Information Systems (GIS) by all levels of Government. There has also been an increase in environmental and regulatory requirements being placed on Corps projects, which requires more analysis of maps and geographic databases to gain approvals and to operate more effectively. Compliance with and adoption of new Federal standards and successful completion of new environmental-related projects has required the Corps to break new ground in the automated geospatial data technology arena. There are no definitive methods for implementing many of the emerging requirements and standards related to geospatial data acquisition and processing. In order to make cost saving implementations of these new standards and procedures, to determine which methods are most effective within the Corps corporate architecture, and to effectively address the spatial data analysis and modeling needs of the civil works mission, the Corps has developed a GIS research program.

SCOPE: This new GIS research program includes research, development, testing and evaluation activities necessary for new GIS software to be effectively applied to improve civil works mission performance and reduce costs. This will include development of techniques to integrate GIS and environmental models, since models are good for describing processes and GIS are good for storing location information and manipulating data. By leveraging the computing power of a GIS, Corps models will enable more efficient ecosystem management, erosion control, and water management. Techniques will also be developed to integrate geospatial and temporal data to improve our ability to perform change detection on rangeland vegetation; to make projections based on trends, as with Corps recreation facility usage or waterborne commerce statistics; and to maintain historical databases of climate and flooding. Development of digital geospatial data library methodologies to facilitate participation in the National Geospatial Data Clearinghouse and to preserve the Corps' significant investment in geospatial data, especially environmental and water resource data holdings will be pursued. Interpolation techniques will be developed to improve data analysis in many Corps efforts such as water surface and flood extent maps. Development of real-time GIS technologies including real-time access to data, on the fly data classification, and automatic notification systems to enable timely response for Emergency Management will be pursued.

Geographic Information Systems (GIS) Research Program (Con't)

SUMMARIZED FINANCIAL DATA

Estimated Six-Year (FY 1996-2001) Program Cost	$7,000,000
Tentative Allocation for FY 1996	500,000
Balance to Complete Six-Year Program after FY 1996	$6,500,000
Allocation for FY 1995	0

JUSTIFICATION: Technologies developed within this GIS research program will remove some of the deficiencies encountered with new geospatial data systems and support a full range of activities, including enabling the Corps to leverage the computing power of a GIS for timely response to emergencies; becoming more efficient at ecosystem management, erosion control, and watershed management; preserving a substantial investment in geospatial data; performing change detection on wetlands, making projections based on facility usage trends; maintaining historical databases of climate and flood data; improving interoperability; enhancing the geospatial data life cycle; and efficiently contributing data to the National databases and participation in clearinghouses.

ACCOMPLISHMENTS IN FY 1995:

None, new initiative.

Justification of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

SUMMARY OF REMAINING ITEMS

CONSTRUCTION, GENERAL

	FY 1995 Allocation	FY 1996 Request	Increase (Decrease)
	$	$	$
2. Navigation Projects			
a. Channels and Harbors			
(II) Projects Not Specifically Authorized By Congress (Sec. 107, P.L. 86-645)	2,400,000	5,000,000	2,600,000
(III) Mitigation of Shore Damages Attributable to Navigation Projects (Sec. 111, P.L. 90-483)	757,000	500,000	(257,000)
c. Inland Waterways Users Board (Sec. 302, P.L. 99-662)			
(I) Board Expenses	35,000	40,000	5,000
(II) Corps Expenses	180,000	185,000	5,000
4. Beach Erosion Control Projects			
b. Projects Not Specifically Authorized by Congress (Sec. 103, P.L. 87-874)	1,100,000	3,000,000	1,900,000
5. Flood Control Projects			
a. Local Protection			
(II) Projects Not Specifically Authorized by Congress (Sec. 205, P.L. 80-858)	16,600,000	22,000,000	5,400,000
(III) Emergency Streambank and Shoreline Protection (Sec. 14, P.L. 79-526)	5,950,000	10,000,000	4,050,000
(IV) Snagging and Clearing (Sec. 208, P.L. 83-780)	300,000	500,000	200,000

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Justification of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

SUMMARY OF REMAINING ITEMS

CONSTRUCTION, GENERAL

	FY 1995 Allocation	FY 1996 Request	Increase (Decrease)
	$	$	$
6. Dam Safety Assurance Program	0	2,000,000	2,000,000
10. Project Modifications for Improvement of the Environment (Sec. 1135, P.L. 99-662)	8,000,000	24,280,000	16,280,000
13. Wetland and Other Aquatic Habitat Creation	2,500,000	15,000,000	12,500,000
14. Employees Compensation (Payments to Department of Labor)	18,071,000	18,984,000	913,000
Total	55,893,000	101,489,000	45,596,000

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APPROPRIATION TITLE: Construction, General, FY 1996

2. Navigation Projects

a. Channels and Harbors

(II) Projects not Specifically Authorized by Congress (Section 107, PL 86-645, as amended)

Allocation FY 1995 $2,400,000 Tentative Allocation FY 1996 $5,000,000

GENERAL: Section 107 of the River and Harbor Act of 1960 (PL 86-645), as amended, authorizes up to $35,000,000 annually for construction of navigation projects where such construction is not already specifically authorized by Congress. Projects are designed to provide the same complete navigation project that would be provided under regular authorization procedures. Each project selected must be economically justified and complete within itself. Federal cost participation cannot exceed $4,000,000 per project.

BUDGET REQUEST: Funds in the amount of $5,000,000 are requested for Fiscal Year 1996 to continue the Section 107 program of development and construction of navigation projects at locations throughout the Nation.

(III) Mitigation of Shore Damages Attributable to Navigation Projects (Section 111, PL 90-483, as amended)

Allocation FY 1995 $757,000 Tentative Allocation FY 1996 $500,000

GENERAL: Section 111 of the River and Harbor Act of 1968 (PL 90-483), as amended, authorizes the construction of projects for the prevention or mitigation of shore damages attributable to Federal navigation works. The cost of installation, operation, and maintenance shall be borne entirely by the United States. Projects first cost shall not exceed $2,000,000 without specific authorization by Congress.

BUDGET REQUEST: Funds in the amount of $500,000 are requested in Fiscal Year 1996 to continue the Section 111 program of mitigation of shore damages attributable to Federal navigation works.

c. Inland Waterways Users Board

Allocation FY 1995 $205,000 Tentative Allocation FY 1996 $225,000

The amount of $225,000 is requested for support, operations and expenses of the Inland Waterways Users Board, established by Section 302 of the Water Resources Development Act of 1986, (PL 99-662) and pursuant to the Board's charter, approved by the Secretary of the Army on March 3, 1987. The Board is an advisory committee subject to the requirements of the Federal Advisory Committee Act (PL 92-463).

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APPROPRIATION TITLE: Construction, General, FY 1996

2. Navigation Projects

c. Inland Waterways Users Board (Continued)

(1) Funds in the amount of $40,000 are requested to meet the estimated expenses of the eleven member Board for its travel, meeting, and other needs to meet the requirements of the Charter.

(2) Funds in the amount of $185,000 are requested for Corps of Engineers expenses related to its responsibilities as an advisory committee sponsor. The Director of Civil Works has been designated Executive Director to the Board, and he has designated staff members to provide continuing Board support. Corps expenses will include personnel costs for administrative Board meeting support, including staff travel, clerical, printing, and related materials.

4. Beach Erosion Control Projects

b. Projects Not Specifically Authorized by Congress (Section 103, PL 87-874, as amended)

Allocation FY 1995	$1,100,000	Tentative Allocation FY 1996	$3,000,000

GENERAL: Section 103 of the River and Harbor Act of 1962 (PL 87-874), as amended, authorizes up to $30,000,000 annually for construction of shore and beach restoration and protection projects where not already specifically authorized by Congress. Projects under this special authority are formulated to provide the same complete project and same degree of protection provided under regular authorization procedures. Each project selected must be economically justified and complete within itself. Federal cost participation is limited to $2,000,000 per project.

BUDGET REQUEST: Funds in the amount of $3,000,000 are requested for Fiscal Year 1996 to continue projects underway in the Section 103 program of development and construction of flood, hurricane, and storm damage protection measures along the Nation's shorelines.

5. Flood Control Projects

a. Local Protection

(II) Projects Not Specifically Authorized by Congress (Section 205, PL 80-858, as amended)

Allocation FY 1995	$16,600,000	Tentative Allocation FY 1996	$22,000,000

GENERAL: Section 205 of the Flood Control Act of 1948 (PL 80-858), as amended, authorizes up to $40,000,000 annually for construction of flood control projects where such construction is not already specifically authorized by

APPROPRIATION TITLE: Construction, General, FY 1996

5. Flood Control Projects

a. Local Protection (Continued)

Congress. Projects are designed to provide the same complete project and same degree of protection provided under regular authorization procedures. Each project selected must be economically justified and complete within itself. Federal cost participation is limited to $5,000,000 per project.

BUDGET REQUEST: Funds in the amount of $22,000,000 are requested for Fiscal Year 1996 to continue the Section 205 program of development and construction of flood damage prevention projects at locations throughout the Nation.

(III) Emergency Streambank and Shoreline Protection (Section 14, PL 79-526, as amended)

Allocation FY 1995 $5,950,000 Tentative Allocation FY 1996 $10,000,000

GENERAL: Section 14 of the Flood Control Act of 1946 (PL 79-526), as amended, authorizes up to $12,500,000 annually for the construction of emergency bank protection works to prevent flood damages to highways, bridge approaches, public works, churches, hospitals, schools, and other non-profit public services. Each project selected must be economically justified and complete within itself. Federal participation under this authority is limited to a cost of not more than $500,000 at any single locality.

BUDGET REQUEST: Funds in the amount of $10,000,000 are requested in Fiscal Year 1995 to continue the Section 14 program of emergency bank protection construction to prevent flood damages to highways, bridge approaches, and essential public facilities at locations throughout the nation.

(IV) Snagging and Clearing (Section 208, PL 83-780, as amended)

Allocation FY 1995 $300,000 Tentative Allocation FY 1996 $500,000

GENERAL: Section 208 of the Flood Control Act of 1954 (PL 83-780), as amended, authorizes up to $7,500,000 annually for removing accumulated snags and other debris, and clearing and straightening of the channels in navigable streams and tributaries thereof, when in the opinion of the Chief of Engineers such work is advisable in the interest of flood control. Federal cost participation under this authority is limited to a cost of not more than $500,000 for any single tributary. Each project selected must be economically justified and complete-within-itself.

BUDGET REQUEST: Funds in the amount of $500,000 are requested in Fiscal Year 1996 to continue the Section 208 program of channel clearing in the interest of flood control at locations throughout the Nation.

APPROPRIATION TITLE: Construction, General, FY 1996

6. Dam Safety Assurance Program

FY 1995 Allocation $ 0 FY 1996 Request $2,000,000

GENERAL: The Dam Safety Assurance Program provides for modification of completed Corps of Engineers dam projects. There are over 700 dam projects under Corps jurisdiction. While no Corps dams are in imminent danger of failure, some may have a higher risk than originally anticipated, based on experience of past extremely large floods and seismic events. Dam modification work is proceeding under existing authorities on projects where cost-effective risk reduction measures have been identified and approved.

BUDGET REQUEST: This Corps-wide budget item includes $2,000,000 for Dam Safety Assurance new starts which may be approved during FY 1995 and FY 1996 as a result of studies now underway. The total FY 1996 budget request for the Dam Safety Assurance Program is $21,095,000. Eight specific projects have been approved by the Assistant Secretary of the Army (Civil Works). Funds in the amount of $19,095,000 to continue these projects in FY 1996 are included with the budget request for each applicable Division. These specifically approved projects are:

Project	FY 1996 Request
Center Hill Dam, TN	$ 904,000
Dewey Lake, KY	1,400,000
Homme Lake, ND	200,000
Howard Hanson Dam, WA	1,587,000
Lake Ashtabula and Baldhill Dam, ND	4,700,000
Sam Rayburn Dam and Reservoir, TX	9,474,000
Tenkiller Ferry Lake, OK	530,000
Waco Lake, TX	300,000
Total	$19,095,000

APPROPRIATION TITLE: Construction, General, FY 1996

10. Project Modifications for Improvement of the Environment (Section 1135, PL 99-662, as amended)

Allocation FY 1995 $8,000,000 Tentative Allocation FY 1996 $24,280,000

GENERAL: Section 1135 of the Water Resources Development Act of 1986 (PL 99-662), as amended, authorizes up to $25,000,000 annually to review the operation of Corps water resources projects to determine the need for structural or operational modifications for the purpose of improving the quality of the environment in the public interest, and to carry out a program of such modifications that are feasible and consistent with authorized project purposes. The non-Federal share of the cost of any modifications will be 25 percent. Modifications with estimated costs over $5,000,000 require specific Congressional authorization.

BUDGET REQUEST: Funds in the amount of $24,280,000 are requested for Fiscal Year 1996 to continue Section 1135 program of structural or operational modifications to projects in the interest of improving the quality of the environment. Funds included in this request are sufficient to provide 75 percent of the costs; the balance of the costs will be provided by the non-Federal sponsor.

APPROPRIATION TITLE: Construction, General, FY 1996

13. Wetland and Other Aquatic Habitat Creation

Allocation FY 1995 $2,500,000 Tentative Allocation FY 1996 $15,000,000

GENERAL: Section 204 of the Water Resources Development Act of 1992 (Public Law 102-580) authorizes the Secretary of the Army to carry out projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands, in connection with dredging for construction, operation, or maintenance by the Secretary of an authorized navigation project. Annual appropriations not to exceed $15 million are authorized. Non-Federal interests would be required to share in a minimum of 25 percent of the cost of each project including the provision of all required lands, easements, rights-of-way and relocations with the value of these contributions included in the 25 percent non-Federal share of the project and to pay 100 percent of the operation, maintenance, and replacement and rehabilitation cost of the wetland or other aquatic habitat area. The costs of the habitat protection, restoration or creation project would be limited to costs which are in excess of those costs necessary to carry out the dredging for the authorized navigation project.

BUDGET REQUEST: The amount of $15,000,000 is requested in Fiscal Year 1996 to continue a cost shared program for the protection, restoration and creation of aquatic and ecologically related habitats, including wetlands. This program would support the objectives of the Coastal America Partnership, the North American Waterfowl Management Plan, and the cooperative agreement between the Department of the Army and the National Marine Fisheries Service.

APPROPRIATION TITLE: Construction, General

14. Employees Compensation (Payments to the Department of Labor)

FY 1994	FY 1995	FY 1996
$18,920,000	$18,071,000	$18,984,000

Public Law 94-273, approved April 21, 1976, 5 USC § 8147b, provides that each agency shall include in its annual budget estimates a request for an appropriation equal to costs previously paid from the Employees Compensation Fund on account of injury or death of employees or persons under the agency's jurisdiction.

The amount of $18,984,000 represents the total costs of benefits and other payments made from the Employees Compensation Fund during the period July 1, 1993, through June 30, 1994, due to injury or death of persons under the jurisdiction of the Corps of Engineers civil functions.

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Justification of Estimates for Civil Works Activities
Department of the Army, Corps of Engineers – Civil
OPERATION AND MAINTENANCE, GENERAL
FISCAL YEAR 1996 SUMMARY OF REMAINING ITEMS

Activity	Nat./ Lab	FY 1995 Appropriation	FY 1996 Recommendation	Increase/ Decrease
		($)	($)	($)
1. Navigation Projects				
a. Channels and Harbors				
- Coastal Inlet Research Program	L	4,000,000	4,000,000	—
- Dredging Operations Technical Support (DOTS) Program	L	3,250,000	3,350,000	100,000
- Dredging Operations and Environmental Research (DOER)	L	—	3,000,000	3,000,000
- Environmental Dredging (Section 312)	N	1,000,000	—	-1,000,000
- Monitoring of Completed Coastal Projects	L	2,100,000	2,100,000	—
- Scanning Hydrographic Operational Airborne Lidar Survey (SHOALS)	L	2,164,000	1,750,000	-414,000
b. Locks And Dams				—
- Repair, Evaluation, Maint. & Rehab. Research (REMR II)	L	6,000,000	6,000,000	—
- River Confluence Ice Research Program	L	1,150,000	1,150,000	—
2. Flood Control				
a. Reservoirs				
- Environmental Review Guide For Operations (ERGO)	N	1,500,000	2,000,000	500,000
- Hazardous Waste Site Restoration Initiative	N	—	3,000,000	3,000,000
- National Dam Safety Program	N	20,000	20,000	—
- Cultural Resources (NAGPRA/Curation)	N	3,235,000	4,000,000	765,000
- Natural Resources Technical Support (NRTS)	L	1,600,000	1,800,000	200,000
- Natural Resources Inventory (NRI)	N	—	500,000	500,000
- Peer Review Program	N	400,000	400,000	—
- Pollution Prevention Program	N	—	4,000,000	4,000,000
- Real Time Water Control Research Program	L	850,000	1,000,000	150,000
- Reinvested User Fees For Recreation Improvements	N	—	5,000,000	5,000,000
- Water Operations Technical Support (WOTS) Program	L	1,550,000	1,600,000	50,000
- Wetlands Action Plan Implementation	N	—	500,000	500,000
4. Protection of Navigation (The three items, a, b, & c, are on one justification sheet)				
- Dredging Data and Lock Performance Monitoring System	IWR	725,000	480,000	-245,000
a. Protecting, Clearing and Straightening Channels	N	50,000	50,000	—
b. Removal of Sunken Vessels	N	1,000,000	1,000,000	—
c. Waterborne Commerce Statistics	N	4,200,000	4,200,000	—
5. National Emergency Preparedness Program (NEPP)	N	7,000,000	7,000,000	—
6. Project Operations Support Program				
- Performance Measurement for Operations and Maintenance	IWR	—	3,500,000	3,500,000
- Policy and Procedure Options for Project O&M	IWR	500,000	—	-500,000
- Civil Works Energy Data System	L	60,000	60,000	—
- Earthquake Hazards Program For Buildings and Lifelines	L	600,000	1,250,000	650,000
- Mississippi River Basin Mainstem Model Development	N	1,000,000	1,000,000	—
- Reliability Models Program For Major Rehabilitation	L	595,000	675,000	80,000
Total		44,549,000	64,385,000	19,836,000

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APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

1. NAVIGATION

a. Channels and Harbors

Coastal Inlets Research Program

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 1994-1999) Program Cost	$20,000,000
Allocation for FY 1995	4,000,000
Allocation Requested for FY 1996	**4,000,000**
Balance to Complete after FY 1996	8,073,000
Decrease of FY 1996 from FY 1995	500,000

JUSTIFICATION: The Corps of Engineers will expend an estimated $8 to $10 billion over the next 25 years at the 100 plus tidal inlets with existing federal navigation projects. Political, engineering, and demographic factors may increase these costs. The public perception, right or wrong, that federal activities at inlets cause adverse response at adjacent beaches may require additional, expense mitigation. Public sensitivity to current maintenance practices, where dredged material is placed in offshore disposal areas, may result in requirements for more expensive nearshore placements of maintenance materials to benefit adjacent beaches. Inlets are the primary conduit for the transport of environmental constituents from bays to the open oceans, and the Corps may be constrained from performing present activities unless accurate predictions of inlet response, and thus environmental response, to such activities are available.

The Corps performs coastal research on a wide-ranging spectrum of topics. Coastal inlets have received a small part of the attention in past research. The Coastal Research Program, funded under the General Investigations R&D banner, has studied some isolated aspects of coastal inlets, particularly the development of scour at structures placed at inlets and the movement of sediment in and near inlets. However, these studies are insufficient in their scope and content to satisfy the design and maintenance needs of the Corps of Engineers relative to coastal inlets. Therefore, the Coastal Inlets Research Program was initiated in FY 1994 to address the needs of the Corps in this area.

The Coastal Inlets Research Program is a high-intensity, short-term program to increase Corps capabilities to cost effectively engineer and maintain the over 100 inlet projects which comprise the bulk of coastal operations and maintenance (O&M) expenditures. Because of their complex nature, the physics and behavior of inlets are poorly understood. So little is known about inlet behavior and response that there is danger that the Corps is spending much more of its O&M budget than is necessary to maintain and enhance inlets. The Coastal Inlets Research Program will study fundamental aspects of inlets such as their short-and long-term behavior and their response to waves, tides, and currents, given their geologic makeup. As the physics and relationships of inlet behavior become better understood, sophisticated tools for management of inlets for navigation projects will become available from the research program.

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MAJOR FEATURES OF THE FY 1996 PROGRAM:

a. Continue to study how inlets change over time and try to define these behaviors in terms of fluid dynamics and sedimentation.

b. Conduct field data collection efforts at an existing inlet so that we can adjust our models and validate our other studies. Field data collection efforts are a major task for this program.

c. Continue to study how removing tidal shoals affects inlet behavior and adjacent beach response. If local shoals can be safely removed with no adverse affects on the inlet, we may be able to use this sand for nourishment of nearby beaches.

d. Conduct laboratory experiments of erosion on the inner inlet banks which contribute to channel shoaling and channel breaching through adjacent shorelines. Laboratory data will be used to validate prediction techniques.

ACCOMPLISHMENTS OF THE FY 1995 PROGRAM:

a. Developed a conceptual model that describes how sandy materials move into and around inlets. This model was necessary to be able to predict how shorelines change with time around inlets.

b. Developed a means for defining how much sandy material approaches, stays in, and leaves the inlet system (this is called a sediment budget). Identified weaknesses in crude methods used in the past with an eye to improving them.

c. Studied how coastal structures affect shoaling in navigation channels. Orientation, length, height, and other aspects of structures were studied.

d. Set up means for sharing coastal inlet data with other agencies, including federal and state agencies.

e. Developed and verified a new method for estimating flow velocities under waves that are reflected by inlet navigation structures to improve estimates of scour that sometimes occurs and threatens these structures.

f. Conducted laboratory experiments and used the results to improve and validate model of the steepening, breaking, and turning (refraction) of waves caused by wave interaction with tidal currents. The modeling of inlet waves is necessary for prediction of sediment movement in inlets (e.g., channel shoaling and scour).

g. Developed a method to link together numerical models of inlet waves, currents, and sediment transport. These inlet processes interact and must be simulated together to predict changes to the inlet and surrounding areas.

APPROPRIATION TITLE: Operations and Maintenance, General -- FY 1996

1. NAVIGATION

a. Channels and Harbors

Dredging Operations Technical Support (DOTS) Program

SUMMARIZED FINANCIAL DATA:

Allocation for FY 1993	$2,790,370
Allocation for FY 1994 (From FY 1993 O&M unobligated carryover funds)	1,750,000
Allocation for FY 1995	3,250,000
Allocation Requested for FY 1996	**3,350,000**

AUTHORIZATION: The Clean Water Act of 1977
The Marine Protection, Research, and Sanctuaries Act of 1972
Stevenson-Wydler Technology Innovation Act of 1980, as amended

JUSTIFICATION: Maintaining the nation's navigation system requires compliance with over 40 statutes and Presidential Executive Orders. The management of dredged material from Corps Operations and Maintenance (O&M) navigation activities requires a comprehensive and interdisciplinary approach from a centralized program to maximize cost effectiveness and implement National policies and laws on a consistent basis.

MAJOR FEATURES: The DOTS Program supplies direct environmental and engineering technical support to all CE elements in support of maintenance projects; training of Corps staff on the latest environmental and engineering techniques associated with dredging and dredged material disposal; short-term work efforts to address generic Corps-wide technical dredging and dredged material disposal problems; and technology transfer of new and emerging techniques in assessment and management of dredged material for determining compliance with environmental protection statutes at Corps operations and maintenance projects.

OTHER INFORMATION: The DOTS Program provides for direct technical support to the overall O&M dredging mission. These technology transfer efforts are accomplished through:

- Technical Assistance - Rapid direct environmental and engineering hands-on technical assistance to districts on project-specific navigation and dredging issues.
- Technology Application - Short-term work efforts addressing effective use of state-of-the-art technologies through demonstrations and applications.

- Marine Board - The Marine Board of the National Academy of Sciences conducts collaborative research with the Corps, Environmental Protection Agency, Department of Navy and other Federal agencies in support of the Corps dredging program. The FY 1996 funding request reflects $150,000 for the Marine Board's activities.

In addition other modes of Technology Transfer play a major role in the program through activities such as identification of appropriate audiences, training seminars and workshops, information exchange bulletins, technical notes, executive notes, videos, seminars, Congressional testimony, magazine articles, professional and journal articles and other innovative approaches.

ACCOMPLISHMENTS: Since inception of the program, over 2,700 requests for technical assistance have been provided on individual Corps navigation dredging projects. Ongoing dredged material technology application tasks include continuing efforts to assist in using the implementation manuals for the Clean Water Act and the Marine Protection, Research, and Sanctuaries Act. Guidance is being developed for applying techniques and methodologies to the management of contaminated dredged material including risk management, equipment selection, confined disposal facility management, and QA/QC guidance. Since the program initiated the sediment management seminars in 1991, over 1,000 personnel from Federal, state and local agencies have been trained at 5 seminars on the latest techniques in regulating, testing, and managing dredged materials. Annually the DOTS program publishes and distributes nearly 25,000 copies of manuals, bulletins, technical reports and videos on dredging and dredged material disposal activities. A joint Corps/Environmental Protection Agency task force continues under this program to develop analytical procedures and a decision-making framework for dioxin-contaminated dredged material. That program is supporting the Corps' navigation dredging mission at Georgetown Harbor, SC; Brunswick Harbor, GA; New York Harbor, NY; Grays Harbor, WA; Mobile Harbor, AL; and Boston Harbor, MA.

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APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

1. NAVIGATION

a. Channels and Harbors

Dredging Operations and Environmental Research (DOER) Program

SUMMARIZED FINANCIAL DATA:

Estimated Eight-Year (FY 1996-2001) Program Cost	$40,000,000
Allocation for FY 1995	0
Allocation Requested for FY 1996	**3,000,000**
Balance to Complete after FY 1996	37,000,000

JUSTIFICATION:

The Corps of Engineers dredging program is responsible for the construction and maintenance of more than 25,000 miles of navigable waterways servicing over 400 ports and harbors of refuge. These efforts constitute over forty percent of the total Operations and Maintenance budget and result in the annual dredging and disposal of over 300 million cubic yards of material.

The passage of a host of environmental legislation beginning in the 1970's the Corps of Engineers has been faced with the challenge of balancing environmental protection with the mandate to economically maintain a viable navigation system. As a consequence operational and environmental requirements have become inseparably linked.

Research has and will continue to be an integral and highly beneficial component of managing the Corps of Engineers dredging program. Dredging research in the 1970's focused on understanding the ecological impacts of dredged material disposal and on evaluating and managing sediments. Research in the 1980's focused on improving dredging operations and project management efficiencies. Balancing environmental protection while accomplishing the navigation dredging mission will be the major challenge of the 1990's. Integration of operational and environmental aspects of dredging must be accomplished within a climate of increasing workload with decreasing fiscal and manpower resources.

Research is proposed in six areas to address the navigation dredging and environmental protection mission. Each research area will generate products critical to resolution of the conflicting operational and environmental demands. These areas are as follows:

1. Contaminated Sediment Characterization and Management
2. Instrumentation for Monitoring and Site Management
3. Nearshore and Offshore Placement of Dredged Material
4. Environmental Windows for Dredging Operations
5. Innovative Equipment Technology Demonstrations
6. Environmental Risk Management for Dredging and Disposal Projects

These areas are the components of the Dredging Operations and Environmental Research Program (DOER).

The DOER Program has been designed to include those efforts identified as having the potential to produce the greatest returns to the Corps of Engineers dredging program. Benefits include environmental quality improvements achieved through proper application of environmental windows; cost-effective compliance with regulatory requirements for identifying and containing contaminated sediments; improved techniques for predicting the movement of dredged material placed in the nearshore or offshore zone, greater flexibility in dredging in sensitive ecological areas, and expanded options for beneficial uses of dredged material.

The DOER program is scheduled to begin in FY 1996 and continue for an eight year period at an approximate cost of $40 million. This research will be conducted in full coordination and cooperation with other appropriate agencies and offices such as Environmental Protection Agency, National Marine Fisheries Service and Fish and Wildlife Service. The program will feature an aggressive technology transfer effort to ensure implementation of research products in the Corps navigation dredging mission.

MAJOR FEATURES OF THE FY 1996 PROGRAM:

a. Identify candidate screening methods for dioxin that, if successfully simplified, will result in significantly reduced testing costs.

b. Define the range of impacts for dioxin-contaminated sediments for selected organisms.

c. Identify areas where implementation of innovative dredging equipment will have a high payback in the Corps' dredging program.

d. Prepare a summary of ecological factors that must be considered in evaluating the risks associated with dredged material disposal alternatives analysis.

e. Identify important physical and environmental factors that enter into deciding whether or not to place dredged material in the nearshore coastal zone.

f. Establish the technical and managerial requirements for implementing a silent inspector system for pipeline dredges and barge disposal.

g. Survey Corps of Engineers districts to identify the fiscal and managerial impacts of seasonal environmental restrictions placed on dredging operations.

MAJOR ACCOMPLISHMENTS OF THE FY 1995 PROGRAM:

No accomplishments: new program.

APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

1. NAVIGATION

a. Channels and Harbors

Monitoring of Completed Coastal Projects

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY 1996-2000) Program CosT	$10,500,000
Allocation for FY 1995	2,100,000
Allocation Requested for FY 1996	**2,100,000**
Increase of FY 1996 over FY 1995	0
Average Annual Allocation for FY 1991-1995	2,025,400

SCOPE: A selective and intensive monitoring of Civil Works coastal projects is executed to acquire information to improve project purpose attainment, design guidance, construction methods, and operation and maintenance (O&M) techniques. Projects that provide maximum quantity and quality of applicable data addressing coastal engineering problem areas are identified and those that best address high-priority problems are selected for monitoring and evaluation. Monitoring plans are developed jointly by Corps of Engineers Districts and the Coastal Engineering Research Center. They consist of either a comprehensive detailed survey to verify post-construction conditions on a one time basis or a continuous (or repetitive) collection of prototype data. Generally, monitoring efforts will not exceed five years in length. The intensive data base is analyzed and the prototype results compared to the pre-construction predictions to verify or upgrade existing design guidance, minimize O&M cost, and assure project formulated benefits. The analyses include structural, topographic, and hydrodynamic responses and intercomparisons of projects when applicable.

JUSTIFICATION: A national program is needed to monitor, evaluate, and document the performance of projects that are designed to solve or mitigate major coastal problems. Coastal engineering projects often involve large financial investments. Overly conservative design of structures may require liberal funding. Conversely, a deficient design often leads to excessive operation and maintenance costs. This program monitors project performance, evaluates the performance against preconstruction projections, and transfers the sometimes costly lessons learned into guidance for the field and management staff. Coastal topography is often changed in response to constructed features of coastal projects. Currents, waves, flushing characteristics, tidal stages, and other hydrodynamic phenomena are also changed by the construction of coastal projects. Information gained from monitoring coastal engineering parameters, including the magnitude and rate of these changes, is required to verify design expectations, ascertain benefits, and evaluate operational and maintenance efficiencies. Information collected from monitored coastal projects will be analyzed locally with regard to topographic and hydrographic responses and project performance in relation to the need of each project. Additionally, this information will be collected and analyzed on a national basis to satisfy the need to document successful designs and to disseminate upgraded field guidance.

ACCOMPLISHMENTS: Technical reports summarizing monitoring results have been published for projects at Agat Harbor, Guam; Cleveland Harbor, OH; Crescent City, CA; Siuslaw River Jetties, OR, and Yaquina Bay, OR. Monitoring plans have been developed for projects at the mouth of the Columbia River, OR/WA; and Chincoteague

Inlet, VA. Also, plans have been developed for detailed inspections of the Nawiliwili Breakwater at Kauai, HI, and the Humboldt Bay, CA, jetties; and breakwaters at Calumet Harbor, IN/IL, and Chicago Harbor, IL. Significant results meriting emphasis include evaluation of spur jetties as an effective alternative to costly maintenance dredging; evaluation of side-scan sonar imagery and an acoustic-raster scanner as cost efficient underwater inspection techniques; development of photogrammetric monitoring techniques for relatively cheap, fast, and accurate structure surveys; verification of a recently developed shallow-water wave model; use of ground penetrating radar for mapping the underground clay surface of nearshore areas; evaluation of improved instrumentation for measuring sediment transport; and data showing the importance of considering the effects of currents along with waves on structure stability. Monitoring results have also assisted in developing more efficient maintenance programs at Cattaraugus Creek, East Pass, Rockaway, Carolina Beach, Puget Sound, Umpqua River, Manasquan Inlet, Oakland Beach, Bodega Bay, Cleveland Harbor, Barbers Point, Ocean City Inlet, Fisherman's Wharf, and the Hawaiian Breakwaters. Valuable lessons learned through monitoring these projects have been transferred to field offices.

FY 1996 ACTIVITIES:

Reports based on the periodic inspections of the Manasquan, NJ, jetties and Burns Harbor, IN, breakwater are in preparation. Monitoring efforts will continue for projects at Colorado River, TX; Redondo Beach, CA; St. Joseph Harbor, MI; Barnegat Inlet, NJ; and St. Paul Island, AK. Monitoring efforts will be initiated at one or both of the following projects located at the mouth of the Columbia River, OR/WA; and/or Chincoteague Inlet, VA.

ITEM	FY 1995	FY 1996
Recommended Monitoring Plan Reports	$ 30,000	$ 30,000
Monitoring and Data Reports	1,770,000	1,770,000
Program Management and Data Storage	300,000	300,000
	$2,100,000	$2,100,000

COORDINATION: Coordination between the Corps of Engineers and other Federal, State, and local agencies is essential for proper accomplishment of this program. In addition to satisfying Corps of Engineers requirements, the data will be made available through publications and will be of value to local, State, and other Federal agencies tasked with the development and implementation of regional coastal and offshore management policies.

APPROPRIATIONS TITLE: Operations and Maintenance, General -- FY 1996

1. NAVIGATION

a. Channels and Harbors

Scanning Hydrographic Operational Airborne Lidar Survey (SHOALS) Program

SUMMARIZED FINANCIAL DATA:

Estimated Five Year (1992-1996) Program Cost	$12,333,000
Allocation for FY 1994 (From FY 1993 O&M unobligated carryover funds)	845,000
Allocation for FY 1995	2,164,000
Allocation Requested for FY 1996	**1,750,000**
Balance to Complete after FY 1996	0

JUSTIFICATION: The purpose of this program is to develop, demonstrate, and implement an airborne laser system capable of performing rapid, cost-effective reconnaissance and condition survey s in navigation channels and harbors. Mission fulfillment for such survey requirements is constrained significantly by the present combination of water-based survey technology and diminishing fiscal and manpower resources. The SHOALS system will address such constraints directly by providing orders-of-magnitude increases in survey speed and coverage and significantly higher survey data densities for comparable levels of resource expenditure. SHOALS development is a joint effort between the U.S. and Canadian governments, with Canada providing approximately 50 percent of system design and construction costs.

ACCOMPLISHMENTS: Following field tests, the SHOALS system was accepted from the contractor in March 1994, an action that concluded Phase II of the program. Phase III, transitioning the system to full operational status is scheduled for FY 1995. During FY 1995, the system will undergo intensive demonstration and characterization on typical Corps projects around the United States as well as on projects for other Federal entities such as the NOAA National Ocean Service and the Navy. Characterization will help define the operational range of the SHOALS system.

FY 1996 PROGRAM: The funds requested will be used to conclude the SHOALS program. During FY 1996, system characterization will be completed and final refinements and upgrades made to the SHOALS system based on the characterization results. A summary program report will be prepared and published, and procedures finalized for integrating SHOALS capabilities into Corps operational use.

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APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

1. NAVIGATION

b. Locks and Dams

Repair, Evaluation, Maintenance, and Rehabilitation Research Program (REMR II)

SUMMARIZED FINANCIAL DATA

Estimated Total (FY 1991-1997) Program Cost	$35,000,000
Allocation for FY 1995	6,000,000
Allocation Requested for FY 1996	**6,000,000**
Balance to Complete after 1996	3,559,000

JUSTIFICATION: The REMR Research Program as originally planned was successfully completed in FY 1989 on schedule and within budget. It clearly demonstrated the benefits of research in getting more value for the dollars spent on Repair, Evaluation, Maintenance, and Rehabilitation (REMR) activities. During the final year of the research program, savings in excess of $40 million were attributed to the use of REMR developed technology. These savings were from first time uses of only a portion of the technology produced and did not include other benefits such as improved safety and reliability, reduced operational manpower requirements, and improved operational capabilities. Additional savings and benefits accrue each time the technology is used with the estimated savings through FY 1994 exceeding $200 million. Based on the successes of REMR, the high demand for its products both within and outside the Corps, and the opportunity for similar successes on other REMR type problems, the REMR-II Program was initiated. We expect the program to continue through FY 1997 with a total cost of $35 million. REMR-II addresses new and different needs which have been identified by Corps field offices. It concentrates on problems and areas with potential for large payoffs and widespread application. Much of the technology being produced has applications outside the Corps of Engineers to other types of infrastructure. A significant effort will be devoted to the coordination and sharing of this technology with other Federal agencies, state and local governments, and the private sector.

The Corps of Engineers now operates and maintains more than 600 hydraulic structures (lock chambers, flood control dams, and powerhouses) at its Civil Works projects. By the turn of the century, 54 percent of these structures will be over 40 years of age. During this same period, annual waterborne traffic is expected to increase and certainly the demand for water provided by Corps operated and maintained water supply reservoirs will increase. In addition, the Corps of Engineers operates and maintains thousands of miles of roads, breakwaters, jetties, groins, dikes, revetments, levees, and floodwalls in its many Civil Works projects.

The continued safe and efficient operation and maintenance of these projects is essential to the economic well-being of the country. The cost associated with the evaluation, maintenance, repair, and rehabilitation of Corps of Engineers projects has become a major part of the Corps' budget. The REMR-II Research Program will help to ensure that the Corps gets the maximum value for the dollars expended.

MAJOR FEATURES OF THE FY 1996 PROGRAM: This will be the sixth year of the REMR-II Program. Major features of each of the six broad problem areas follow.

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1. Concrete and Steel Structures. Guidance will be developed for the efficient repair of concrete hydraulic structures using geotextiles, membranes, and roller compacted concrete technologies. Field exposure tests will be completed on a selected concrete repair materials for the purpose of developing performance criteria. Stability analysis procedures for concrete gravity structures will be upgraded. Guidance will be developed for the evaluation and repair of hydraulic steel structures.

2. Geotechnical. Guidance will be developed on maintenance practices for vegetation on levees. A workshop will be conducted on cost-effective shoreline erosion control techniques for reservoirs. Guidelines will be developed for the protection of levees against overtopping, surface erosion, and current and wave attack. A classification system for construction stone will be developed that provides an accurate assessment of stone durability.

3. Hydraulics. A workshop will be conducted on the optimum solutions for icing problems at Corps projects. A beta version of a software system for evaluation of navigation training structures using microcomputers will be released and training provided on its use.

4. Coastal. Physical model testing will be completed on the study of toe stability of coastal structures in a combined wave and flow environment; all data collected during the study will be analyzed to develop design guidance for sizing stone for new or rehabilitation work. A computer design program for concrete armor units will be updated. Guidance will be developed on concrete armor construction techniques, and information published on structural and hydraulic response of various concrete armor unit and stresses in optimal armor units.

5. Electrical and Mechanical: Research will be initiated on environmentally compatible lubricants for use on hydraulic structures.

6. Operations Management: Condition indices will be developed to quantitatively rate the present condition of earth and rockfill dams, and the operating machinery of locks and dams. Management systems will be developed for lock and dam retaining structures and for the concrete in dams. Training and assistance will be provided to Corps District personnel for implementing and upgrading, when necessary, the management systems developed to date.

COORDINATION: Coordination of this program will be pursued on three forms. First, expertise relevant to REMR problems will be obtained from the technical staffs of various field operating agencies, and a synthesis of existing knowledge will be available to field operating agencies. Second, the program will be coordinated with other Federal agencies (U.S. Bureau of Reclamation, Tennessee Valley Authority, and Federal Energy Regulatory Commission) through the biennial Interagency Research Coordination Conferences, annually through REMR-II meetings, and more frequently through meetings between experts in the particular problem areas. Third, a REMR Information Exchange Bulletin will be published on an irregular basis and distributed to over 3,500 individuals, technical organizations and societies, and local, state, regional, and Federal agencies.

ACCOMPLISHMENTS FOR FY 1995. This was the fifth year of funding for the scheduled seven year REMR-II program. A summary of activities under each problem area follows:

1. Concrete and Steel Structures. Guidance was developed on repairs using precast concrete, use of

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overlay materials for concrete structures, maintenance and repair of concrete structures subject to chemical attack, and assessment of remedial measures for existing concrete hydraulic structures not meeting stability criteria. Evaluation techniques were developed for steel hydraulic structures and procedures were developed for repair material selection. A conference was sponsored on new Non-Destructive Testing Technologies for concrete structures. An Alkali-Silica reaction prediction model was developed for use in determining the remaining service life of concrete containing reactive aggregate.

2. Geotechnical. The study on alternative treatments for rehabilitation of relief wells was completed, and results used to update Corps guidance documents. Laboratory tests on innovative materials and techniques for levee rehabilitation were completed and field demonstrations initiated. Preliminary guidelines were developed on the effects of vegetation on levee performance. Guidance was developed for determining the impact of drains on uplift pressures beneath concrete gravity structures. A numerical model was developed which predicts the propensity for spillway knickpoint erosion as a function of stream discharge and vacuum pressure. Guidance was developed on the use of acoustic emissions monitoring to determine rock mass fluid flow and strain effects.

3. Hydraulics. Conversion of numerical sedimentation models for mini and microcomputers application was completed. A numerical model was developed for the evaluation and maintenance of high velocity channels and a user's manual was published. Optimum maintenance repair, and rehabilitation solutions were developed for cold weather operational problems at hydraulic structures.

4. Coastal. The final version of the Coastal Structures Acoustic Raster Scanner (CSARS) and associated software for underwater structures inspection was completed, and guidance was provided for inspection of the underwater portions of coastal structures. Guidance was developed on repairing coastal structures with CORE-LOC Armor (new armor shape), and on concrete armor construction techniques. Regular and irregular wave tests in fixed bed model with flood flow was completed for determining the toe stability of coastal structures. The study on monitoring grout sealants for rubble-mound breakwaters was completed and guidance provided on grout sealants.

5. Electrical and Mechanical. Final guidance was developed on the maintenance and removal of lead pigmented paints on hydraulic structures. Guidance was provided on paint systems for use on damp metal surfaces, and interim guidance was provided on VOC compliant coating systems for locks and dams.

6. Operations Management. Condition indices were developed to quantitatively rate the present condition of roller dam gates, concrete in dams, lock lift gates, and retaining structures at locks and dams. Management systems were developed for tainter gates and roller gates.

7. OTHER. Four additional REMR Information Exchange Bulletins were published; an additional supplement to the REMR Notebook was issued which contained technical notes on materials, equipment, methods and techniques for maintenance and repair; and REMR technology was incorporated into appropriate Civil Works Engineering Manuals.

APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

1. NAVIGATION

b. Locks and Dams

River Confluence Ice Research Program

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY 1994-1998) Program Cost	$4,500,000
Allocation for FY 1995	1,150,000
Allocation Requested for FY 1996	**1,150,000**
Balance to Complete after FY 1996	1,564,000

JUSTIFICATION: Ice accumulations and ice jams, usually associated with river confluences where a tributary joins a mainstem, are directly or indirectly responsible for structural damages to Corps facilities such as locks and dams, river training structures, and bank-stabilizing riprap. The cost of these damages is estimated to be $50 million a year. Ice jams also often lead to increased erosion of river beds and banks. Many Corps structures will undergo extensive maintenance and rehabilitation in the near future which should take into consideration potential ice effects so as to reduce future maintenance costs. The River Confluence Ice (RCI)Program will provide guidance in addressing these effects.

Another concern to the Corps of Engineers is the adverse effects of heavy ice accumulations and ice jams on inland navigation. Ice slows down or totally suspends shipping of critical supplies (coal, oil, grain, etc.), and often causes extensive damages to fleeting and mooring areas and the loss of towboats and barges. The River Industry Action Committee (RIAC) in St. Louis has estimated that ice jams at the confluence of the Mississippi and Missouri Rivers in December 1989 created costs of $1.5 to $3.0 million to the commercial navigation industry alone. This does not include lost revenue. Shoreline property owners suffered even larger losses.

Complete elimination of ice accumulation problems at river confluence is not possible, nor is it economically justifiable. The River Confluence Ice Program is intended to reduce risks and uncertainties as well as reduce the costs of river confluence ice problems by improving the operation and maintenance of Corps facilities, with associated reductions in losses of shoreline property owners and commercial shipping concerns.

MAJOR FEATURES OF THE FY 1996 PROGRAM: The purpose of the program is to address the risks and uncertainties of river confluence ice problems by developing practical methods for immediate use by Corps personnel to reduce the ice-event severity and frequency at the junctions of tributaries and their mainstems. The program features development of new or improved methods and techniques as well as synthesis, application, and extension of existing technology directed at alleviating ice jam problems in the Corps navigation mission. The major aspects of the program are described below.

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1. Prediction of Ice Jams at River Confluences. Ice jams at river confluences occur suddenly and often unexpectedly, causing both severe damage to Corps projects and delays to navigation, and providing little time for protective measures to be taken, emergency equipment to be deployed, or warnings to be broadcast. The objective of this work unit is to develop methods for assessing and predicting ice breakup problems at river confluences, both in general and at specific sites. These predictions, based on given physical river conditions and weather, will provide short-term notice of ice-breakup events. A related objective is to determine new data requirements and develop better data gathering systems.

2. Structural Ice Mitigation Techniques in Tributaries and Mainstems. Tributaries often release large quantities of ice when the mainstem cannot convey that ice, resulting in localized ice accumulations at the mouths of tributaries, which can suspend mainstem river traffic, and ultimately impact the operation of Corps projects such as locks jams occur at the confluence of two rivers when the tributary releases large quantities of ice at a time when the main stem is itself laden with ice. Any combination of severe flooding, stoppage of river traffic, and substantial damage to Corps projects usually result. The objective of the work unit is to develop primarily structural methods to retain ice in tributaries until main stem is cleared of ice and to determine the effectiveness of these methods depending on the flow conditions in the reaches upstream from the confluence.

3. Non-structural Ice Mitigation Techniques and Mainstems. Under the same circumstances that prompt the previous work unit, non-structural measures may, under certain conditions, offer advantages over structural techniques in dealing with these problems, either by reducing quantities of ice formed or by promoting the early weakening and/or clearing of ice from the receiving reaches. The objective of this work unit then is to develop non-structural methods to reduce ice and/or delay ice release in tributaries until the mainstem is cleared of ice, and/or to accelerate the clearing of ice from reaches below confluences. The objective also includes determining the effectiveness of these methods for a variety of flow conditions in the reaches adjacent to the confluences, and optimizing combined (structural/non-structural) approaches.

4. Effects of Project Operations. Water releases from multipurpose reservoirs and navigation projects during the winter months may result in or aggravate ice accumulations at river confluences or elsewhere. The objective of this work unit is to provide Corps Water Control Centers and Corps project operators with guidance for evaluating the effects of flow releases on 1) ice jam formation and evolution, 2) sheet ice and ice jam breakup, and 3) flow routing during freezing temperatures. A related objective is to develop techniques under which flow control may be used for reducing ice problems at river confluences, and providing guidance on minimum releases during low-flow conditions in winter.

5. Effects of Channel Modification. Many river confluences ice problems are initiated by channel characteristics. It is necessary to be able to predict the changes in ice accumulation characteristics which would result from man-made and natural channel modification. The objective of this work unit is to identify the role of channel characteristics in initiating particular ice problems at river confluences, and to formulate and predict the effects of specific channel modifications in reducing or eliminating the tendency for ice jams to form.

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ACCOMPLISHMENTS IN FY 1995:

1. Developed an initial ice-jam prediction technique, and described it in a report sent out for critical comment by the prospective users in Corps districts. Made plans for the first field exercise to test the prediction technique in the 1995-96 winter. This will show how well we will be able to improve the anticipation of ice problems, so that corrosive action might be taken earlier than we are presently able to do.

2. Evaluated several structural approaches to controlling ice jamming, after conducting experiments in the lab (the experiments were described in a draft report). This work will help us choose which methods to concentrate on as being the most promising for future success.

3. Further developed certain non-structural ice-control techniques, and completed experimental evaluations in the lab. These approaches may work where structural techniques cannot be used, and they often promise less-costly solutions. Combinations of structural and non-structural ice-control methods are also being pursued.

4. New advice and guidance on winter project operations were proposed and submitted to Corps districts for critical comment. Certain changes in the operation of projects during the ice season may simplify and reduce problematic river ice accumulations.

5. A specific know ice problem area was chosen and studied to evaluate channel modification for solving the ice accumulation problems that occur at this site. Early indications are good that flow patterns can be adjusted to reduce ice jams that cause flooding and navigation problems.

6. Results of the RCI Program to date were described in a report which was distributed to all affected Corps districts, so that district personnel will be aware of the program's progress and will offer feedback to maximize the usefulness of the program's products.

APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

2. FLOOD CONTROL

a. Reservoirs

Environmental Review Guide for Operations (ERGO)

SUMMARIZED FINANCIAL DATA

Estimated (FY 1992-1996) Program Cost	$12,500,000
Allocation for FY 1994	4,000,000
Allocation for FY 1995	1,500,000
Allocation Requested for FY 1996	**2,000,000**
Balance to Complete after FY 1996	6,000,000

JUSTIFICATION: The Department of Defense is committed to being the leader in complying with environmental laws. The Corps of Engineers developed an environmental compliance checklist, the Environmental Review Guide for Operations (ERGO). ERGO is needed to provide leadership through demonstration of compliance with environmental laws. ERGO is a self assessment tool, but can also be used for formal, or external assessments. Trained managers, with technical assistance from district elements, state authorities or private sector contractors, are using ERGO to determine if their operations are being conducted in compliance with Federal and state environmental laws and regulations. Following ERGO based assessments, identified deficiencies can be prioritized and placed in budgets and work schedules. Initial ERGO assessments at all O&M General funded projects and facilities were completed in FY 1994.

The FY 1996 funding will continue the contract assessment process re-initiated in FY 1995 to provide for follow-up ERGO assessments, beginning with those projects and facilities which were assessed in the earliest phases of ERGO implementation. This funding will cover approximately 20% of the total projects to be assessed over a five year period beginning in 1995. This second cycle of ERGO assessments will assure environmental compliance has been met and maintained.

APPROPRIATION TITLE: Operations and Maintenance, General -- FY 1996

2. FLOOD CONTROL

a. Reservoirs

Hazardous Waste Site Restoration Initiative

SUMMARIZED FINANCIAL DATA:

Estimated Three-Year (FY 1996-1998) Program Cost	$18,500,000
Allocation for FY 1995	0
Allocation Requested for FY 1996 (New Program)	**3,000,000**
Balance to Complete after FY 1996	15,500,000

JUSTIFICATION: Section 3016, Resource Conservation and Recovery Act requires all Federal agencies to undertake a continuing program to compile, publish, and submit to the EPA Administrator (and to states where appropriate) an inventory of each site which the Federal agency owns or operates or has owned or operated at which hazardous waste is stored, treated, or disposed of or has been disposed of at any time. The *Army Environmental Strategy's* Restoration Pillar goal states: "*clean up contaminated sites as quickly as resources permit to protect human health and the environment.*"

Managers throughout the Corps realize that potential hazardous waste sites lay buried on their projects. Comprehensive investigations at these projects will uncover instances where former solid waste disposal sites (most have been closed/abandoned for many years) were improperly closed, and/or contain varying amounts of hazardous wastes. These sites may include landfills or old farm and community dumps, etc., created prior to land acquisition by the Corps, well as sites created by Corps operations and maintenance activities early in project history.

Under this initiative project and facility managers, with technical assistance from district elements, state authorities, or private sector contractors, will conduct comprehensive surveys of their projects to locate and document the existence of potential problem sites. Identified problem sites can then be analyzed, prioritized and corrective actions developed.

This proactive initiative will insure that most "skeletons" are uncovered and those posing potentially serious environmental threats are addressed Corps-wide. Coupled with the ongoing environmental compliance assessment program designed to address daily project/facility operations, this initiative will further strengthen environmental stewardship throughout the Corps. Divisions and districts will be instructed to screen projects under their jurisdiction to identify those with the highest probability of having hidden problems. FY 1996 funding allocations will provide for investigations at Corps operating projects with priority placed on those most likely to have significant hidden problems ("worst first" approach). A portion of the funding will also be dedicated to initiating a clean up program for high priority sites. Out year funding will address corrective action at other hazardous waste sites located via the project survey process.

APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

2. FLOOD CONTROL

a. Reservoirs

National Dam Safety Program

SUMMARIZED FINANCIAL DATA

Continuing Program Annual Cost	$20,000
Allocation for FY 1994 (from FY 1993 O&M unobligated carryover funds)	20,000
Allocation for FY 1995	20,000
Allocation requested for FY 1996	**20,000**

JUSTIFICATION: Dams in the United States must be constructed, operated, and maintained in accordance with sound engineering practices to prevent failure and avoid potential loss of life and destruction of property.

BACKGROUND: By Executive Order 12148 and Presidential Directive, the Federal Emergency Management Agency (FEMA) was designated as lead agency in efforts to enhance national dam safety. The Corps of Engineers and FEMA singed a Memorandum of Understanding (MOU) for the purpose of establishing responsibilities for management and administration assistance in the implementation of the National Dam Safety Program. The MOU was entered into pursuant to the Economy in Government Act, 31 U.S.C. 1535. A principal objective is to provide for allocation of Corps funding to FEMA on a programmatic rather than project-specific basis to enable development of a more systematic approach to effecting national dam safety. FEMA will provide support in development of federal guidelines for dam safety, promotion of public awareness programs, publications, training materials and workshops.

APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

2. FLOOD CONTROL.

a. Reservoirs.

Cultural Resources(NAGPRA/Curation)

SUMMARIZED FINANCIAL DATA

Estimated Total (FY 1994 - 1996) Program cost	$ 11,166,000
Allocation Requested for FY 1994	3,931,000
Allocation Requested for FY 1995	3,235,000
Allocation Requested for FY 1996	4,000,000
Balance to Complete after FY 1996	0

JUSTIFICATION: The Native American Graves Protection and Repatriation Act (NAGPRA) contains data gathering, reporting, consultation, and permitting provisions that have near-term and long-term implications for Civil Works programs and projects. The Department of the Interior (DOI) is now working to develop a set of Federal regulations that will implement NAGPRA. However, because of the immediate impacts and specific reporting requirements imposed by the Act, it is imperative that U.S. Army Corps of Engineers (USACE) Commands begin NAGPRA implementation, even in the absence of DOI regulations. In addition, the Corps is responsible for the curation of a large volume of cultural resource materials collected from its flood control projects over the years. Curation of these materials is required by a number of public laws.

BACKGROUND: On 16 November 1990, NAGPRA was signed into law. NAGPRA is a complex piece of legislation that addresses the recovery, treatment, and repatriation of Native American and Native Hawaiian cultural items by Federal agencies and museums. As defined by the Act, cultural items are human remains, associated funerary objects, unassociated funerary objects, sacred objects, and objects of cultural patrimony. In FY 1994, USACE Commands began the process of inventorying human remains and associated funerary objects and completing summaries as mandated by the legislation. In addition, the Corps has been responsible for curation of cultural resource materials collected from its flood control projects. These collections are extensive and are located at a variety of curation facilities across the nation. A Mandatory Center of Expertise (MCX), located at the St. Louis District, has been established to provide overall management of the Corps programs and will serve as an information source and a centralized base for curation compliance and contracting. The costs shown here represent only the cost to accomplish NAGPRA work and to establish the MCX. Long term curation costs are unknown at this point. However, the MCX in providing NAGPRA inventories will assist in establishing the extent of Corps holdings. Following the completion of NAGPRA, the MCX will be in a position to effectively manage the Corps curation efforts.

MAJOR FEATURES IN THE FY 1996 PROGRAM: USACE Commands will complete the process of inventorying Native American and Native Hawaiian human remains and associated funerary objects and complete summaries of unassociated funerary objects, sacred objects, and objects of cultural patrimony as mandated by the legislation. Information will be made available to interested individuals and groups through notices in the Federal Register and USACE Commands will continue to engage in formal consultation with tribes and organizations for the legislated purpose of repatriating cultural objects for which there are legitimate claims. The St. Louis District MCX will facilitate and assure consistent nationwide program implementation and operation.

APPROPRIATION TITLE: Operations and Maintenance, General -- FY 1996

2. FLOOD CONTROL

a. Reservoirs

Natural Resources Technical Support (NRTS)

SUMMARIZED FINANCIAL DATA

Estimated Annual Cost for Continuing Program	$1,800,000
Allocations for FY 1994(From FY 1993 O&M unobligated carryover funds)	40,000
Allocation for FY 1995	1,600,000
Allocation Requested for FY 1996	**1,800,000**

AUTHORIZATION: This program is conducted under the general authority of PL 78-534, the Flood Control Act of 1944 (58 Stat. 887).

JUSTIFICATION: The NRTS program provides immediate, short-term technical assistance to the field natural resources managers. The principle activity of this program is to provide direct technical assistance to field elements to achieve operational efficiencies at least cost. On an average annual basis, WES receives approximately 50 requests for assistance to solve problems confronting NRM managers of Corps operated and maintained projects. The increase in funds are for inflation and additional district requests for assistance. Additional technology transfer and technology maintenance activities conducted under this program assure the availability of appropriate, state of the art technology to meet the field managers' needs. In addition, direct support provided to the field includes the purchase of park ranger and manager uniforms; development, printing, and distribution of water safety program materials; the development, printing, and distribution of regional information brochures; and similar activities.

STATUS OF IMPLEMENTATION: The program has been in operation since 1987. It is a fully implemented, continuing, annual program.

FY 1996 PROGRAM: The majority of the FY 1996 program will consist of direct response to field requests for assistance; direct support for the purchase of park ranger and manager uniforms; and the development, printing, and distribution of water safety related brochures and materials. Additional technology transfer activities will include software maintenance for several microcomputer based programs used by NRM field offices, several educational workshops, and the publishing of quarterly technical bulletins.

APPROPRIATION TITLE: Operations and Maintenance, General -- FY 1996

2. FLOOD CONTROL

a. Reservoirs

Natural Resources Inventory (NRI)

SUMMARIZED FINANCIAL DATA

Estimated (FY 1996-1997) Program Cost	$3,000,000
Allocations for FY 1995	0
Allocation Requested for FY 1996 (New Program)	**500,000**
Balance to Complete after FY 1996	2,500,000

JUSTIFICATION: The U.S. Army Corps of Engineers is the steward of the lands and waters at Corps water resources projects. The Civil Works Natural Resources Management Program mission is to manage and conserve those natural resources. To assure long term resources use and resource protection it is necessary to identify and categorize the existing resources. Inventories of natural resources on Corps properties will be implemented to categorize existing resources and opportunities.

An inventory of natural resources will be developed, including the identification of priorities, schedules, and conducting the inventory. Inventory information, obtained by districts, will be used to conduct analysis for natural resources management improvement and to develop interim guidance, culminating in an ER. Natural resources management goals and objectives will be incorporated into resources planning and procedures. Operation management plans will be completed using natural resources inventories to better prioritize management strategies.

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APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

2. FLOOD CONTROL

a. Reservoirs

Peer Review Program

SUMMARIZED FINANCIAL DATA

Estimated Annual Cost for Continuing Program	$ 400,000
Allocations for FY 1994 (From FY 1993 O&M unobligated carryover funds)	57,000
Allocation FY 1995	400,000
Allocation Requested for FY 1996	**400,000**

AUTHORIZATION: This program is conducted under the general authority of PL 78-534, the Flood Control Act of 1944 (58 Stat. 887).

JUSTIFICATION: The peer review program provides a systematic procedure for broad-scope evaluation of the Corps of Engineers Operations, Construction, and Readiness Division (OCR) programs by teams of peer professionals. The evaluation includes interpretation and implementation of policy guidance, operational planing process, budget development and execution, personnel staffing levels, and management of available resources. The goals are to achieve a quality, cost effective program to serve our customers/partners better; achieve consistent implementation of relevant laws, policies and regulations; provide an information exchange of good ideas; identify program strengths, areas that need improvement and alternative solutions to management problems; and identify issues requiring resolution at higher organizational levels. This is not an audit nor an inspection program. The requested funds are for travel costs of the peer review team members.

STATUS OF IMPLEMENTATION: The program was implemented initially in FY 1994. Twenty percent of districts will be reviewed in FY 1995. The program will be conducted as an integral program management tool on a continuing basis.

FY 1996 PROGRAM: A 5-year schedule for evaluating OCR programs in each district has been established. The peer review program will be conducted at 6 districts in FY 1996. A team of peer professionals will visit each district, evaluate appropriate OCR programs, and prepare a report of findings to include recommendations and "good ideas" for information transfer. The program will be conducted at a constant level of effort to facilitate continuing and effective OCR program evaluation.

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APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

2. FLOOD CONTROL

a. Reservoirs

Pollution Prevention Program

SUMMARIZED FINANCIAL DATA:

Estimated Three-Year (FY 1996-1998) Program Cost	$13,000,000
Allocation for FY 1995	0
Allocation Requested for FY 1996 (New Program)	**4,000,000**
Balance to Complete after FY 1996	9,000,000

JUSTIFICATION: The President signed Executive Order (EO) 12856, Federal Compliance with Right to Know Laws and Pollution Prevention Requirements, on August 3, 1993. The EO requires all Federal agencies to proactively manage their facilities so that, to the maximum extent practicable, the quantity of toxic chemicals entering any wastestream, including any spills or other releases to the environment, is reduced as expeditiously as possible through source reduction; that waste that is generated is recycled to the maximum extent practicable; and that any wastes remaining are stored, treated or disposed of in a manner protective of public health and the environment. EO 12856 establishes 31 Dec 99 as the deadline for each agency to reduce it's total releases of toxic chemicals (or toxic pollutants) to the environment and to off-site treatment and storage facilities, by 50 percent.

EO 12856 focuses on pollution prevention through source reduction as opposed to end-of-pipe treatment. The Department of Defense, in it's Pollution Prevention Policy Statement, noted that up front funding for pollution prevention saves operational costs through efficient use of resources and reducing compliance costs.

DOD policy requires the development, maintenance, and implementation of written pollution prevention plans at each facility. The plans are to include baselines, pollution prevention assessments and investment strategies. This funding request will; (1) initiate project specific pollution prevention assessments and prevention plans to identify adverse impacts and cost effective alternatives, identify resource needs and develop implementation schedules, (2) identify non-polluting substitute products with broad applicability; and (3) execute pollution prevention plan recommendations, emphasizing those with a payback period of three years or less. Facilities generating the most toxic chemical waste will be addressed first.

Section 4-404 of the EO states "Federal agencies shall place high priority on obtaining funding and resources needed for implementing all aspects of this order, by identifying, requesting and allocating funds through line-item or direct funding requests".

APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

2. FLOOD CONTROL

a. Reservoirs

Real Time Water Control Research Program

SUMMARIZED FINANCIAL DATA:

Estimated Six-Year (FY 1994-1999) Program Cost	$ 5,190,000
Allocation for FY 1995	850,000
Allocation Requested for FY 1996	**1,000,000**
Balance to Complete after FY 1996	2,679,000

JUSTIFICATION: The Corps owns and operates more than 600 single and multi-purpose water control projects in the U.S. Within this broad responsibility, the Corps commits major resources to averting and/or alleviating the consequences of extreme hydrologic events. Operating systems of reservoir projects to enhance flood control, navigation, hydropower, water supply, water quality, recreation, and other benefits is a complex process. It requires the evaluation of the current and future state of hydrologic conditions, the assessment of current and expected reservoir system demands, and the influences of navigation, dredging, recreation, and many other operational considerations. All of these uses must be evaluated on a system wide basis for a maximum effectiveness.

Three river systems, the Missouri, the Columbia, and the Appalacicola-Chattahoochee-Flint (A-C-F), are prime examples of river basins where operational strategies must be developed and balanced to address system-wide needs. Key environmental data, project status, and meteorological conditions must be obtained from real time data acquisition networks and by data exchange and coordination with the National Weather Service and other water agencies to accomplish the task. Forecasts of future river and project conditions must be made. Improved criteria need to be developed to recognize the onset and persistence of local and regional drought conditions such as those that have occurred in many areas of the country. Operational decisions must be implemented at project locations, and emergency evacuation/flood fight activities such as those that occurred for 1993 floods in the upper Mississippi-Basin must be initiated, as necessary. All Corps water control activities must be coordinated with other water agencies, affected public interests, and their Congressional delegations. This requires the Corps to continue to improve its tool to better perform these tasks.

Significant development of water control support tools has occurred but in piecemeal fashion by individual Corps offices, often without benefit of Corps-wide application. In order to make the best use of funds and manpower these on-going activities need to be consolidated and a coordinated, well conceived program of research and development is being implemented. This Real Time Water Control Research Program will address the basic ideas of the water control decision process. Program objectives are to develop an integrated system of data acquisition, data processing, decision support and information display capabilities that allows Corps water control managers to make better and more timely decisions and to more effectively convey current water information to all Corps organizational elements, cooperating agencies, the general public, and Congress.

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MAJOR FEATURES OF THE FY 1996 PROGRAM: The coordination and consolidation of ongoing efforts and new initiatives into the Real Time Water Control Research Program which began in FY 1994 include the following activities:

1. Continue improvement of various tools developed and tested in FY 1995 and integrate them into a single system of computer software that is generalized for use at any Corps office.

2. Adapt and integrate a new reservoir simulation tool developed in another research program for use with water control systems.

3. Further develop water control information storage and retrieval systems to include water control manuals, project design documents, and audio/video documentation of project operations.

4. Continue development of decision support systems to include expert system technology which can provide warning to Corps personnel and emphasis hydrologic events or project operational situations requiring special attention or immediate decisions. This type of automated assistance is considered critical as the quantity of information available to water control personnel tends to obscure situations which if acted upon early in their development could yield an improved operational response.

5. Continue development of tools to assist in the development of strategic, long-term operational policies and rules for water control systems. These tools will contribute to development of annual water control plans which consider rules and range of possible coming season inflows. They will also address evaluating release patterns consistent with annual operation plans in real time and evaluating release impacts through a reservoir simulation model.

ACCOMPLISHMENTS IN FY 1995:

1. Continue development of automated visualization tools that bring maps, aerial and satellite photos/sensor images, forecast model information, and on-the-ground measurements together soon after hydrologic events occur (in real time). This type of information was successfully used in a limited fashion during the 1993 Mississippi floods. Perform pilot studies and demonstrations of prototype tools at working Corps offices to determine usefulness and suggest appropriate changes.

2. Make improvements in the basic streamflow forecast model developed in FY 1994 which uses spatial measurements of precipitation from new National Weather Service radars. Improve the detail and accuracy of hydrologic simulation and integrate the model into the plans for a uniform way for technicians and managers to use this model and other computerized tools.

3. Expand and improve coordination and technical implementation of inter-agency data exchange. Organize technical capabilities to reduce duplication of effort by separate Corps offices and provide backup facilities in the event of equipment or communication failures.

4. Continue development of intra-agency information communication and delivery systems. The goal is to provide timely and reliable water control information to managers at all levels in all Corps organizational elements so they may assist in the decision process and be responsive to emergency situations and outside inquiries. In the Corps offices associated with Mississippi River Basin operations, continue development and coordinate data exchange to facilitate generation of flow and stage forecasts for the whole river system.

5. Expand prototype data storage and retrieval systems to include remotely sensed images from satellites and other sources. Expand capabilities for routine inquiries and automated use of stored water control information throughout all Corps offices.

6. Continue development of tools that assess impacts of operational decisions such as potential flood damages, meeting project purposes, and changes in environmental conditions.

7. Continue assistance to Corps field offices in the implementation of available water control tools.

APPROPRIATION TITLE: Operations and Maintenance, General -- FY 1996

2. FLOOD CONTROL

a. Reservoirs

Reinvested User Fees for Recreation Improvements

SUMMARIZED FINANCIAL DATA

Estimated Annual Cost for Continuing Program	$5,000,000
Allocations for FY 1995	0
Allocation Requested for FY 1996 (New Program)	**5,000,000**

AUTHORIZATION: This program is conducted under the general authority of PL 78-534, the Flood Control Act of 1944 (58 Stat. 887) and the provisions of the Land and Water Conservation Fund Act of 1965, as subsequently amended.

JUSTIFICATION: Recreation user fees are paid by visitors to Corps projects for the use of certain developed recreation sites and facilities. These fees are subsequently used to operate, maintain, and improve the recreation sites and facilities at which they were collected. The reinvestment of user fee revenues in Corps developed and operated recreation areas will improve the quality of recreation experience available to the general public for their fee payment, while increasing the fee collection potential of these recreation sites.

BACKGROUND: The Corps has collected fees for overnight camping at developed facilities pursuant to LWCFA authority since the mid-70s. The Omnibus Budget Reconciliation Act of 1993 provided the Corps additional authority to charge recreation fees for the use of certain developed day use facilities. The fees collected under these authorities reduce the cost to the Federal Treasury of operating the Corps recreation program by assuring recreation users pay a greater share of the costs for maintaining the facilities they enjoy.

FY 1996 PROGRAM: Five million dollars in user fees will be reinvested in improvements to recreation sites and facilities on Corps projects. These funds will be expended in conjunction with the Challenge Cost Share, Volunteer, Cooperating Associations, and other resource maximizing programs when appropriate to achieve optimum benefit for the investment.

APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

2. FLOOD CONTROL

a. Reservoirs

Water Operations Technical Support (WOTS) Program

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost for Continuing Program	$1,600,000
Allocation for FY 1994 (from FY 1993 O&M unobligated carryover funds)	500,000
Allocation for FY 1995	1,550,000
Allocation Requested for FY 1996	**1,600,000**

JUSTIFICATION: Maintaining the water quality in Corps Operation and Maintenance (O&M) reservoir and waterway projects nation-wide requires compliance with numerous statutes and state standards. Providing the necessary technology can best be accomplished through a comprehensive and interdisciplinary approach from a centralized program to maximize cost effectiveness and ensure the broadest dissemination of information and timely implementation.

MAJOR FEATURES: The WOTS Program provides effective environmental and engineering technology for the management of environmental water quality problems at all Corps reservoir and waterway projects. In addition, the WOTS Program provides technology for problems occurring from the presence of Zebra Mussels as they relate to water quality issues at Corps projects and other non-indigenous species, tailwater fisheries at pump-back hydropower projects, and water quality impacts of shoreline erosion and reservoir sedimentation.

OTHER INFORMATION: The WOTS Program provides technical support to the Corps' mission related project responsibilities. The program performs two basic functions:

(1) Direct Technical Assistance: Provides rapid direct environmental and engineering technical assistance to all CE elements in support of the operation and maintenance of Corps projects for specific water quality and related aquatic environmental issues. This technical assistance is provided through hands-on support, training of Corps personnel, and participation on field project teams.

(2) Technology Application: Short duration efforts addressing specific water quality and related aquatic environmental issues with state-of-the-art technologies through the conduct of workshops and field demonstrations at Corps projects.

In addition, a continual element of the WOTS Program is the transfer of technology through the publication of information exchange bulletins, technical notes, executive notes, technical reports, miscellaneous papers, instruction reports, videos, meetings, seminars, briefings at field offices, and congressional testimony.

ACCOMPLISHMENTS: Since its inception in FY 1985, WOTS has responded to almost 800 requests from every Corps District and HQUSACE. Based on the increasing trend for numbers of requests from Districts, Divisions, and HQUSACE on water quality and Zebra Mussel problems, it is anticipated that more than 100 requests will be received in FY 1996. In FY 1994, in addition to a Reservoir Shoreline Erosion Workshop and Corps Chemists Meeting, two new methods of information/technology transfer will be implemented. A Corp-wide WOTS Electronic Bulletin Board System was placed on-line, as well as the publication of WOTS Technical Notes which will provide technical "how-to" information for field personnel in a short, concise, reference-notebook format. The WOTS Program coordinates with water quality elements of other Federal agencies such as the Tennessee Valley Authority, Bureau of Reclamation, Fish and Wildlife Service, and the Bonneville Power Association including problems on the spread of Zebra Mussels, the impacts of hydropower facilities, and cold water releases in tailwater areas on fisheries. WOTS ensures that the technologies developed under EWQOS, WQRP, ZMRP, and other Federal agencies are current and readily available to all Corps field offices. There are currently six technology demonstration activities being conducted under WOTS:

(1) Water Quality Enhancement at East Sidney Lake, NY: Cooperative effort with Baltimore District, USDA Soil Conservation Service, Cornell University, and local extension offices to implement methods for reducing material loadings for water quality enhancement.

(2) Evaluation of Regulated Releases on Reservoir Water Quality: Cooperative effort with St. Paul District at Eau Galle Reservoir, WI, on the use of operational technologies to improve water quality conditions.

(3) National Water Quality Assessment (NAWQA): Coordinated effort with the USGS to provide information and expertise to enhance planning, operation, and maintenance efforts at Corps district offices.

(4) Self-Aerating Turbine Technology: Cooperative effort with Tennessee Valley Authority, Bureau of Reclamation, and others to aspirate air into the discharge to increase improvements to the release water quality, increase power production, and reduce costs.

(5) Aeration System Design: Cooperative effort with the Chicago and Los Angeles Districts for the design and demonstration of an aeration system.

(6) Evaluation of Integrated Reservoir Environmental and Water Management: Cooperative effort with the Savannah District to demonstrate the integration of water quantity and water quality management in a multi-reservoir basin within the framework of a computerized decision support system.

APPROPRIATION TITLE: Operations and Maintenance, General -- FY 1996

2. FLOOD CONTROL

a. Reservoirs

Wetlands Action Plan Implementation

SUMMARIZED FINANCIAL DATA

Estimated (FY 1996-1999) Program Cost	$2,700,000
Allocations for FY 1995	0
Allocation Requested for FY 1996 (New Program)	**500,000**
Balance to Complete after FY 1996	2,200,000

JUSTIFICATION: Section 307(a) of the Water Resources Development Act of 1990 (P.L. 101-640) established that wetland goals are to be part of the Corps water resources development program and directed the development of an action plan to achieve those goals. The U.S. Army Corps of Engineers Wetlands Action Plan was completed in January 1993 with procedural guidance to implement the developed plan in October 1993.

The Wetland Action Plan identifies operations actions which support and enhance stewardship of wetlands on Corps lands through identification, management and restoration. An inventory of wetlands will be conducted, including the identification of priorities and schedules. The inventory information will be used to conduct analysis for wetland management improvement and to develop interim guidance, culminating in an Engineering Regulation. Wetland goals and management objectives will be incorporated into natural resources planning and procedures.

APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

4. PROTECTION OF NAVIGATION

Dredging Data and Lock Performance Monitoring System

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost for Continuing Program	$475,000
Allocation for FY 1994 (From FY 1993 O&M unobligated carryover funds)	293,000
Allocation for FY 1995	725,000
Allocation Requested for FY 1996	**480,000**

AUTHORIZATION: These efforts are necessary to provide data for efficient management of Congressionally authorized navigation projects, as well as to respond to specific public laws, including PL 96-269 (Minimum Dredge Fleet) and PL 100-656 (Small Business Set-aside).

JUSTIFICATION:

(1) **Dredging** Data: Continue ongoing analytical support to the Dredging and Navigation Branch in HQUSACE (CECW-OD). Ongoing tasks include continuing collection of dredging contract data including advertising schedules, contract award and completion data, multi-year continuing analysis of dredging costs for FY 1995 (FY 1994-1996) and FY 1996 (FY 1995-1997), collect actual dredging execution data for prior years for inclusion in the Dredging Information System (DIS). These funds also support the management, enhancement, operation and maintenance of the National Dredging Statistics Program. the program is designed to meet the dredging data needs of Corps Headquarters, divisions and districts, local project sponsors, the dredging industry, and all agencies requiring dredging data or summary statistics. This amount includes Coastal Project Database development, software refinement and hardware upgrades to enable interactive user access, integration with other NDC and Corps databases as well as continued user support and training.

(2) **Lock Performance Monitoring System (LPMS)**: These funds support the operation and maintenance of the Lock Performance Monitoring System (LPMS) database. The amount covers teleprocessing services for full LPMS service remote batch, interactive timesharing, and network services for the nationwide program on the CEAP System. This also includes funding for Lock Characteristics and Decision Support Systems.

FUNDING PROFILE

		FY 1995	FY 1996
(1)	Dredging Data & Statistics	$ 560,000	$ 315,000
(2)	Lock Performance Monitoring System	165,000	165,000
	TOTAL	$ 725,000	$ 480,000

APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

4. PROTECTION OF NAVIGATION

SUMMARIZED FINANCIAL DATA:

Allocation for FY 1994	$5,360,000
Allocation for FY 1995	$5,250,000
Allocation Requested for FY 1996	$5,250,000

JUSTIFICATION: The budget estimate of $6,189,000 provides for carrying out the following work:

a. **Protection, Clearing, and Straightening of Channels**

Section 3 of the 1945 River and Harbor Act (as amended by Section 915(g) of the 1986 Water Resources Development Act) provides continuing authority for limited emergency clearing of navigation channels not specifically authorized by Congress. A limit per project is not specified; however, in any given year, a maximum of $1,000,000 may be used nationwide. Work pursuant to this authority is undertaken as emergency measures to clear or remove unreasonable obstructions to navigation in navigable portions of rivers, harbors and other waterways of the U.S., or tributaries thereof, in order to provide existing traffic with immediate and significant benefit. the amount requested is an estimate based on historical experience. If actual requirements are more than estimated, funds will be reprogrammed to meet demonstrated needs.

b. **Removal of Sunken Vessels**

Removal of sunken vessels, or other similar obstructions, is governed by Sections 15, 19, and 20 of the River and Harbor Act of 1899, as amended. Primary responsibility for removal belongs to the owner, operator, or lessee. If the obstruction is a hazard to navigation and removal is not undertaken promptly and diligently, the Corps may obtain a court judgement requiring removal, or remove the wreck and seek reimbursement for the full cost of removal and disposal. Determinations of hazards to navigation and Federal marking and removal actions are coordinated with the Coast Guard in accordance with a memorandum of understanding between the two agencies dated 16 October 1`985. Removal procedures are outlined in 33 CFR 245. The amount requested is an estimate based on experience. If removal requirements are more than estimated, funds will be reprogrammed to meet actual needs.

c. **Waterborne Commerce Statistics Center**

The allocation for the Waterborne Commerce Statistics Center (WCSC) would provide funds for not only the Center itself, but also for the district data collection effort, Department of Commerce and the Harbor Maintenance Fee.

The Corps of Engineers serves as the Nation's sole source collection and distribution agent for domestic waterborne commerce statistics in conformance with the River and Harbor Act of 1922 and the Water Resources Development Act of 1986 (PL 99-662). Activities supporting this mission include: (1) collecting and reporting of statistical data; (2) processing, compiling, and annually publishing statistical data and

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information on waterborne commerce and vessels moving on the inland waterways, the Great Lakes, and through all U.S. ocean ports; (3) compiling and publishing of an annual report listing and describing all United States vessels engaged in commerce, along with the principle trades in which they are engaged and their zones of operation. These data provide the information necessary for accurate benefit-cost analyses to determine new navigation project feasibility and to establish funding priorities for the operation and maintenance of existing projects.

FUNDING PROFILE:

		FY 1995	FY 1996
(a)	Protecting, Clearing and Straightening Channels	$ 50,000	$ **50,000**
(b)	Removal of Sunken Vessels and Obstructions	1,000,000	**1,000,000**
(c)	Waterborne Commerce Statistics Center	4,200,000	**4,200,000**
	TOTAL	$ 5,250,000	$ 5,250,000

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APPROPRIATION TITLE: Operations and Maintenance, General -- FY 1996

5. NATIONAL EMERGENCY PREPAREDNESS PROGRAM (NEPP)

AUTHORIZATION: Executive Orders 10480 and 12656 which cite several acts including PL 93-288, the basis for the Federal Response Plan.

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost for Continuing Program	$7,000,000
Allocation for FY 1995	7,000,000
Allocation Requested for FY 1996	7,000,000

JUSTIFICATION: This agency must be prepared to accomplish its continuity of operations and continuity of government responsibilities during national/regional crises. This entails support of civil government through coordinated execution of federal agency plans and the planning/conducting of exercises to test readiness to provide such support. The cited executive directives assign significant responsibilities for such preparation (planning, training, research and testing) to the Corps of Engineers. This includes responsibility for development of preparedness guidance and plans for response to all regional/national emergencies, whether caused by natural phenomena or acts of man and the local preparedness necessary to support Corps continuity of operations. The Corps provides engineering and construction support to state and local governments in response to catastrophic natural and technological disasters. Rapid response to disasters of a regional/national magnitude requires extensive pre-emergency planning and preparedness activities to provide a work force capable of shifting from routine missions to crisis operations and the organizational command and control structure necessary to provide a coordinated and comprehensive response in the critical early stages of a catastrophic disaster. The National Emergency Preparedness Program provides for the necessary preparation for natural and technological disasters requiring a large Federal presence in support of state and local governments which have been overwhelmed by a disaster event and national level emergency water planning. The preparation requires the development of plans, training of employees, conducting of training exercises, including support to Federal Emergency Management Agency (FEMA) exercises, and coordination within DOD and with other Federal agencies and state and local governments. Unlike the Corps' Civil Works programs related to individual project planning, development and operations and maintenance, the NEPP requires the development of an integrated command planning and response capability. Corps divisions have a key role in the planning, coordination and operational control of multi-district response(s) and the integrated preparedness effort required to accomplish this response. Preparation also includes the Headquarters sponsored Corps-wide programs necessary to provide the capabilities and operational command and control required by Corps field commands in order to accomplish their NEPP responsibilities, both routinely and in specific emergency response situations. (This does not fund Headquarters manpower.)

ACCOMPLISHMENTS: National Emergency Preparedness Program funds provide support to two major national level civil planning areas: (a) support to the nation's ability to mobilize national assets to meet national/regional level emergencies and (b) support to continuity of government and continuity of operations during national emergencies. Activities include conducting studies and analyses which identify national support requirements; the development, coordination, review and updating of plans; development of operating guidance and procedures; training of personnel in emergency response skills and procedures; conducting exercises to test readiness; operating and maintaining emergency response command and control facilities and

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support systems; and providing program management for activities such as the Individual Mobilization Augmentee program, which the Corps has been able to utilize to support natural disaster response.

FISCAL YEAR 1996: The FY 1996 program will provide for continuing significant changes to National Emergency Preparedness Program implementation. Lessons learned from the Midwest Floods of 1993, as well as those gleaned from events such as Hurricanes Hugo, Andrew and Iniki, Loma Prieta and Northridge earthquakes and the evolving New Madrid earthquake scenario, clearly indicate that the Federal Response Plan, while a solid system, will not provide for a response to national catastrophic disasters that is sufficiently timely or comprehensive. During FY 1994 the Corps initiated a program that uses the deliberate planning process to develop scenario specific catastrophic disaster plans. This should provide for a more comprehensive response to national catastrophic disasters. More extensive coordination with Federal agencies and state and local governments will be incorporated into plan development.

MAJOR FEATURES IN THE FY 1996 PROGRAM: The FY 1996 program will build on changes initiated in FY 1994 to enable the Corps to rapidly respond to a broad spectrum of emergencies, with emphasis on national catastrophic disasters.

OTHER INFORMATION: The NEPP is complementary to the Flood Control and Coastal Emergencies appropriation. Although both programs are related to emergency situations, there is a distinct separation of responsibilities. The NEPP provides for the planning, training, and testing activities necessary to develop the capability to meet essential requirements associated with local continuity of operations and response(s) to scenario specific national/regional crises. The FCCE, on the other hand, provides for emergency flood fighting, post-flood repair and restoration of flood and shore protection works damaged or destroyed by floods, hurricanes or wave action and Corps Federal Response Plan requirements.

APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

6. PROJECT OPERATIONS SUPPORT PROGRAM

Performance Measurement for Operations and Maintenance

SUMMARIZED FINANCIAL DATA:

Total Study and Implementation Cost Estimate	$5,500,000
Allocation for FY 1995	0
Allocation requested for Fiscal Year 1996 (New Program)	3,500,000
Balance to complete after Fiscal Year 1996	2,000,000

JUSTIFICATION:

Background: Congress appropriated funds in FY 92 and 93 to conduct a Policy and Procedures Options Study for Project Operation and Maintenance. Based on findings from this comprehensive study efficiency and effectiveness measures have been developed and are being implemented to assure that Federal expenditures for project O&M provide a justified level of service at least cost. These measures are intended to simplify and clarify the budgeting process, streamline the bureaucracy, reduce internal regulations, enhance customer satisfaction and measure performance, all of which support and are consistent with the objectives of National Performance Review (NPR). Additionally, the O&M Program Improvement initiative has been accepted as a pilot project under the auspices of the Government Performance and Results Act of 1993 (GPRA). To achieve the objective of the O&M program of decentralized decisionmaking and accountability (performance measurement), accurate program execution data must be easily and readily accessible at all levels of the organization, particularly for the Operations Project Manager at the project level. One of the findings of the O&M study was that although legacy data systems exist, they are not tied together, readily accessible at all levels and standardized. Additionally, to enhance the predictive maintenance capability there needs to be a standardized automated maintenance management system. The requirements analysis, design and development for such a standardized system was included in the Integrated Logistics System (ILOGS), part of the Corps Information System Modernization Program (ISMP). The Corps ILOGS effort is now directed at utilizing, wherever possible, existing standard Army and Department of Defense Logistics Systems.

Objective: A critical factor in achieving the overall objective of the O&M Program Improvement initiative and supporting the intent of NPR and GPRA is the linking and standardization of existing data bases. The combination of Performance measurement and project data being available to the project manager will result in service standardization, and communicating a justified level of service Corps-wide. This will be accomplished by interfacing and linking present data systems with commercial off-set software (COTS) to provide the operations project manager a single point of access for performance measurements and management and execution data.

Fiscal Year 1996: An activity will be initiated so that all management data and information will be accessible throughout the Corps. This will require the conversion, integration and standardization of present data collection systems. The legacy systems will be converted to the Corps standard CEAP environment into Oracle database software with communication tools developed to provide Corpswide access and data distributions. The integration and merging of data elements will reduce duplication of data storage and eliminate the requirement of multi-database use, providing a more efficient and effective management tool. This effort will design, develop, test and deploy the linking and single point access for Corps managers. Funds appropriated for FY 1996 will enable an initiation of resource analysis, site identification and field testing which will lead to limited deployment. This activity will facilitate the execution of the performance measurement system which is intended to support the requirements of the Government Performance and Results Act of 1993. This will also include an analysis, in conjunction with the Army Logistics Agency, to determine the suitability of existing Army systems for adoption and deployment as a standard automated maintenance management system. We will inform the Committee of the results of the analysis before we proceed with this component of ILOGS.

Fiscal Year 1997: Database conversion, linking and software programming will be continued and deployed at the project sites level will be completed in this fiscal year.

APPROPRIATION TITLE: Operations and Maintenance, General -- FY 1996

6. PROJECT OPERATIONS SUPPORT PROGRAM

Civil Works Energy Data System

SUMMARIZED FINANCIAL DATA:

Five Year Program Cost	$300,000
Allocation for FY 1994 (from FY 1993 unobligated carryover funds)	60,000
Allocation for FY 1995	60,000
Allocation Requested for FY 1996	**60,000**
Balance to complete after Fiscal Year 1996	120,000

AUTHORIZATION: This program is being conducted under the authority of Public Law 100-615 Federal Energy Management Improvement Act of 1988.

JUSTIFICATION: The purpose of this program is to respond to the requirements of Public Law 100-615, Federal Energy Management Improvement Act. The objective of PL 100-615 is to provide energy consumption, conservation and management activities of the Federal Government The energy report is sent to Congress each year.

STATUS: Civil Works Energy Data System (CWEDS) is a microcomputer based system designed to aid in the management and reporting of energy consumption of Civil works projects. This data is required by AR 11-27. The system enables user to track energy deliveries , issues, inventories, losses sources and users.

FY 1996 PROGRAM: The funds requested will be used to provide guidance, technical assistance in support of CWEDS program and training for district personnel to collect and process data required by the Army.

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APPROPRIATIONS TITLE: Operation and Maintenance, General -- FY 1996

6. PROJECT OPERATIONS SUPPORT PROGRAM

Earthquake Hazards Reduction Program for Buildings and Lifelines

SUMMARIZED FINANCIAL DATA:

Estimated Eight Year Program Cost (FY 1992-FY 1999)	$8,488,000
Allocations Prior to FY 1995	438,000
Allocation for FY 1995	600,000
Allocation Requested for FY 1996	**1,250,000**
Balance to Complete after FY 1996	6,200,000

AUTHORIZATION: This program is being conducted under the authority of Public Law 101 614, November 1990, National Earthquake Hazards Reduction Program Re-authorization Act and individual project authorizations for maintaining safety of personnel and emergency response capability.

JUSTIFICATION: The purpose of this program is to respond to the requirements of Public Law 101-614, National Earthquake Hazards Reduction Program (NEHRP) and Executive Order (EO) 12941, Seismic Safety of Existing Federal Buildings. The objective of PL 101-614 is to establish and initiate for buildings and lifelines a systematic approach to reducing loss of life, injuries, and economic costs resulting from earthquakes in the United States. Lifelines are defined as public works and utility systems (electrical power, transportation, water supply and sewers, telecommunications, and gas and liquid fuels). The EO directs all Federal departments and agencies to develop an inventory of their owned and leased buildings by 1998 and estimate the cost of mitigating unacceptable seismic risks in their buildings.

STATUS OF IMPLEMENTATION: Development of seismic screening and evaluation guidance for Corps buildings is being completed. Surveys are being completed of Corps owned buildings located in areas of high and moderate seismic risk to determine which buildings will require a seismic evaluation. Workshops are being developed to train district personnel to correctly and uniformly apply the evaluation procedures. Corps buildings located in high seismic risk areas will be evaluated first. Work to develop guidance for the seismic evaluation and risk mitigation of lifeline facilities will continue with the completion of lifeline reports for navigation locks and reservoir outlet works. A report on the status of the seismic evaluations performed to date on Corps dams and appurtenant structures will be prepared.

FY 1996 PROGRAM: The funds requested will be used by the districts to evaluate the seismic resistance of Corps buildings in high and moderate seismic risk areas. Technical support, evaluation guidance, and monitoring of the seismic evaluations will be provided by the Corps' Earthquake Hazards Reduction Program (CEHRP) Technical Center for Civil Works Buildings and Lifelines. Seismic mitigation of buildings and lifelines, where necessary, will be funded through project funds.

APPROPRIATION TITLE: Operation & Maintenance, General -- FY 1996

6. PROJECT OPERATIONS SUPPORT PROGRAM

Mississippi River Basin Mainstem Model Development

SUMMARIZED FINANCIAL DATA

Estimated Three-Year (FY 1994-1996) Program Cost	$2,375,000
Allocation for FY 1994 (From FY 1993 O&M unobligated carryover funds)	375,000
Allocation for FY 1995	1,000,000
Allocation Requested for FY 1996	**1,000,000**
Balance to complete after Fiscal Year 1996	0

JUSTIFICATION: The Mississippi River basin has a drainage area of approximately 1,245,000 square miles, equivalent to 41% of continental USA. Through the years various flood control projects have been built and operated throughout the basin by various Federal and local governments as well as private agencies. The Corps of Engineers has built and operates a large number of reservoirs, levees, floodways and flow diversion structures in the basin for flood control and navigation. These projects are operated and maintained by five Corps divisions in a general coordinated manner.

In recent years, various hydrologic models have been developed to simulate the rainfall-runoff process over the watershed in real-time. These models have been mostly implemented by Corps offices to operate single or sub-basin reservoir projects.

During hydrologic extremes such as the drought of 1980's and the great flood of 1993, intensive coordination among the 5 divisions in the Mississippi River Basin is required to operate the mainstem Mississippi River project as a system. One of the critical elements for operating the Mississippi River Basin projects is the time series of inflow data from tributaries to the mainstem Mississippi River. This information will be improved once the Division's water control models for the major tributaries are in place.

In order to simulate the flow conditions along the mainstem Mississippi River, a mainstem hydraulic model must be applied. The Mississippi Basin Model (MBM) partially served this purpose until its decommission recently due to advanced age and cost of maintenance. As a logical substitution and extension for the MBM, a mainstem mathematical model is being developed.

STATUS OF IMPLEMENTATION: Major accomplishments in FY 1995 include:

1. Completion of development and testing of the one-dimensional model (1-D) for the Upper Mississippi and Lower Missouri Rivers.

2. Initiate model development for Ohio and Lower Mississippi Rivers.

3. Continuation of two-dimensional model development for specific reaches.

MAJOR FEATURES OF THE FY 1996 PROGRAM: Coordinate and continue the ongoing efforts in development of the Mississippi River numerical models in FY 1995.

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1. Complete development of the 1-D, unsteady state model of the Ohio and Lower Mississippi Rivers; test the 1-D model with historical flood data (including 1993 event).

2. Complete development of the two-dimensional unsteady capability for the specific reaches of the mainstem model; test the combined model with historical flood data (including 1993 event).

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APPROPRIATION TITLE: Operation and Maintenance, General -- FY 1996

6. PROJECT OPERATIONS SUPPORT PROGRAM

Reliability Models Program for Major Rehabilitation

SUMMARIZED FINANCIAL DATA:

Estimated annual Cost for Continuing Program	$675,000
Allocation for FY 1994 (From FY 1993 unobligated carryover funds)	585,000
Allocation Requested for FY 1995	595,000
Allocation Requested for FY 1996	**675,000**

JUSTIFICATION: The purpose of this program is to respond to yearly needs of Districts and Divisions which are preparing Major Rehabilitation reports for the upcoming fiscal year. The objective of the program is to provide reliability models for project features or components which are being considered for Major Rehabilitation, or to provide procedures to consider the impact of various chemical, environmental or physical processes in a reliability analysis.

STATUS OF IMPLEMENTATION: Reliability models and other analytical tools have been provided in support of Major Rehabilitation reports on four navigation and three hydropower projects. In addition, 8 rehabilitation workshops have been conducted in the last 3 years to provide assistance to the Districts as they prepare their reports. These workshops offer guidance in conducting reliability and risk analyses, and provide the opportunity for interdisciplinary teams from the Districts to discuss their particular project with HQUSACE and other Districts personnel. A report is in the process of being prepared to show the progress of the preparation of reliability models in support of the FY 1995 rehabilitation reports and a similar report will be prepared for the FY 1996 work.

FY 1996 PROGRAM: The requested funds will be used to prepare reliability models and collect data for reliability analyses anticipated to be required by several Districts. Reliability models and/or data are anticipated to be needed for the following: Collection of data and performing tests on the Ice Harbor Lift gates, Instrumentation of gates to determine performance modes and verify load cycles used in reliability analyses, development of preliminary hazard function analysis procedures, investigation of tainter gates at Soo Locks and Lock and Dam 26 to verify performance modes, and development of preliminary sliding analysis procedures to be used in reliability analyses. It is also anticipated that 3 rehabilitation workshops would be conducted. The makeup of these units may change due to the need of the Districts and Divisions.

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APPROPRIATION TITLE: **Regulatory Program, FY 1996**

AUTHORIZATION: Rivers and Harbors Act of 1899, Sections 9, 10 and 13
Federal Water Pollution Control Act of 1972, as amended, Section 404
Marine Protection, Research and Sanctuaries Act of 1972, Section 103

SUMMARIZED FINANCIAL DATA:

Appropriation for Fiscal Year 1995	$101,000,000
Appropriation Requested for Fiscal Year 1996	$112,000,000
Increase in FY 1996 over FY 1995	$ 11,000,000

JUSTIFICATION:

Background. The Corps of Engineers has been regulating certain activities in the nation's waters since 1890. Most authority for administering the program has been given to the 36 District Commanders and 11 Division Commanders. National public awareness of wetlands and increasing state and Federal regulatory emphasis on wetlands continue to grow. On August 24, 1993, the White House proposed a new plan for improved management and protection of the nation's wetlands. While implementation of the White House Plan will improve the efficiency and effectiveness of the program, it requires additional resources. The general permit program is the primary method of reducing the intensity of Federal regulation of minor activities. In order to eliminate duplication of effort wherever possible, the Corps makes use of general permits, joint processing procedures with states, state program general permits (where the state is adequately protecting waters of the U.S.), and interagency review coordination. In addition, the Corps supports the Administrations's efforts to advocate assumption of Section 404 authority (in non-navigable waters) by states wherever states are able to implement appropriate regulatory controls.

Types of Activities Regulated.

a. Construction and other work in navigable waters of the United States;

b. Construction of fixed structures and artificial islands on the outer continental shelf;

c. Discharges of dredged or fill material, including those associated with excavation and landclearing activities, into the waters of the United States (including wetlands); and

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APPROPRIATION TITLE: Regulatory Program, FY 1996

d. The transportation of dredged material for the purpose of dumping it in ocean waters.

Public Interest Review. The decision whether to issue a permit is based on an evaluation of the probable impact of the proposed activity on the public interest. That decision reflects the national concern for both protection and utilization of important resources.

ACCOMPLISHMENTS: The Corps is now authorizing about 65,000 activities per year through formal permit review procedures and is regulating thousands of additional minor activities which do not require formal review. About 8,000 to 10,000 are authorized by individual permits and more than 55,000 are authorized under regional or nationwide general permits. Although the evaluation process for an individual permit is typically greater than that for a general permit, many regional and nationwide authorizations involve substantive evaluation and determination of necessary mitigation by the Corps. Without regional and nationwide general permits, all activities would have to be intensively evaluated as individual permits. In January 1992, the Corps expanded its nationwide permit program to further reduce the regulatory burden on the public. Since late FY 1989 the Corps has been actively moving to ensure greater protection of the nation's wetlands while continuing to provide fair and equitable decisions in a reasonable period of time. The Corps and the other Federal resource agencies are using the Corps 1987 wetlands delineation manual for identifying and delineating wetlands while the National Academy of Sciences completes a technical study of the delineation issue. The Corps is currently making more than 40,000 jurisdiction determinations a year. Since August 1993 the Corps has been regulating discharges associated with excavation activities which ensures more comprehensive protection for the nation's wetlands. Regulation of excavation activities has substantially increased workload in many districts and is expected to continue to do so through FY 1996.

FISCAL YEAR 1996: The total request of $112 million is an $11 million increase over the FY 1995 appropriation of $101 million. This budget increase is necessary to implement program changes and responsibilities associated with the President's August 1993 Wetlands Plan. About $6 million of this increase is required for the Corps to adopt an administrative appeals process for Corps permit decisions and jurisdiction determinations. Currently, applicants only have legal recourse when they are denied permits. A Corps appeal system would be more accessible and affordable to the average applicant. Under the new plan the public will be able to appeal jurisdiction determinations; currently, a Corps jurisdiction determination cannot be challenged until the applicant applies for a permit and a final permit decision is rendered by the Corps. The appeals process for both permit denials and jurisdiction determinations is expected to require a total of 50 additional workyears which would be allocated within overall Corps manpower ceilings. The $6 million would also cover other costs such as increased travel. In addition to funding appeals reviewers in districts, these funds would cover one to two appeals reviewers in Corps division offices. The Corps cannot implement the appeals process without these additional funds and workyears. (This initiative was deferred from FY 1995 because of funding limitations).

About $1.5 million of the FY 1996 increase is intended to help reduce delays in the permit evaluation process. The President's plan mandates that most permit decisions will be made within 90 days. These funds are needed to help meet this 90 day decision requirement.

The remaining $3.5 million will cover inflation over FY 1995 levels and allow the program to maintain its current staffing levels.

In addition, special efforts focusing on wetlands will continue at FY 1995 levels. These include wetlands training of Corps personnel and technical assistance to Corps districts from the Corps Waterways Experiment Station (About $1 million is provided for this assistance.) The Corps will also continue to administer the Wetland Delineation Certification Program which certifies individuals as wetland delineators, thus improving the quality of jurisdictional determinations by private consultants. About $250,000 will be provided to the Construction Engineering Research Laboratory for further improvements and implementation of a computer based system for tracking permits and wetlands losses.

The $112 million will be applied as follows ($000):

Permit Evaluation	$77,400
Enforcement	$26,000
Appeals Process	$6,000
Studies & Wetlands Technical Support	$1,600
Other Navigation Regulations	$200
Environmental Impact Statements	$800
TOTAL	$112,000

APPROPRIATION TITLE: Flood Control and Coastal Emergencies (FCCE), FY 1996

Disaster Preparedness/Emergency Response

SUMMARIES FINANCIAL DATA:

Appropriation Requested for FY 1996	$20,000,000
Appropriation, FY 1995	$14,979,000

JUSTIFICATION: The Corps responsibility for emergency/disaster response requires that a fully functional engineering/construction/emergency operations response capability be maintained. This response can be under Corps authorities, such as PL 84-99, Flood Control and Coastal Emergencies or in support of other agencies, particularly the Federal Emergency Management Agency (FEMA) under PL 93-288, as amended, The Stafford Act, and EO 12148. Response activities under the Corps PL 84-99 authority include the following: all preparedness activities; emergency operations (flood response and post flood response); emergency repair and restoration of flood control works which are threatened, damaged or destroyed by flood; emergency protection of existing Federal hurricane and shore protection works; the repair or restoration of Federal hurricane or shore protective structures damaged or destroyed by wind, wave, or water action of other than ordinary nature; preventive work performed prior to flooding when conditions pose a flood threat to life or property; providing emergency supplies of clean water to any locality confronted with a source of contaminated water causing or likely to cause a substantial threat to public health and welfare; and provision of water supplies to drought-distressed areas by well drilling on a reimbursable basis or transportation of water at Federal cost. In support of FEMA's disaster response and recovery activities, Corps mission assignments have included: emergency debris removal; preliminary damage assessments; detailed damage survey reports; temporary housing; infrastructure restoration; emergency snow removal contracting, engineering services, and construction management; and other support which calls upon the Corps engineering, contracting, and construction expertise. The request provides sufficient funding for normal disaster preparedness activities; emergency operations activities; lab support; and rehabilitation of projects damaged by disaster events. For each FCCE specific event, Headquarters augments its staff to manage the event, including resource allocations (dollars and people) logistics of moving people and materials, funding contractors and materials; and coordination with other agencies involved in the event. These augmentation activities include overtime for Headquarters staff, travel to the event area, materials and supplies, increased staff from the field to include Individual Mobilization Augmentees (IMA), and Geographic Information System (GIS) services to support disaster operations.

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ACCOMPLISHMENTS: Planning and preparedness activities for natural disaster response are funded under PL 84-99 authority in the category "Disaster Preparedness." The purpose of these activities is to ensure an engineering organization capable of responding to both natural and man-made disasters to include catastrophic events of major proportions. Major efforts include: the review and updating of response plans to ensure viability; training personnel to ensure their capability to respond in adverse circumstances; procurement and prepositioning of critical equipment and supplies which would likely not be available during initial stages of a response; periodic exercises to test and evaluate plans, personnel and training; inspection of non-Federal flood control projects to ensure their viability to provide flood protection; laboratory support for field operations; and, the overall management of the response program to ensure a workable, coordinated effort is undertaken in a timely manner. The funding identified under Activities in Support of Others reflects planning and coordination efforts to accomplish preparedness actions needed for Corps support to Federal response to all natural disasters, including earthquakes and the Federal Response Plan to include comprehensive inter-agency planning to support state and local requirements. Accomplishments in the area of Emergency Operations Activities and Rehabilitation reflect current and future requirements that occur routinely throughout the year.

REASON FOR INCREASE: The increase in the area of Corps Statutory Authorities is reflective of an increase in planning and preparedness activities as a result of the Midwest and Southeast Floods as well as the Northridge Earthquake. This requires additional pre-positioned supplies and equipment (i.e., sandbags, pumps, etc.) as well as the requirement to meet with and educate the public. Increases in the area of Activities in Support of Others reflect additional regional planning associated with the Federal Response Plan to include comprehensive inter-agency coordination to support state and local requirements. Funding requirements for emergency operation activities and rehabilitation work are based on historical data related to specific events.

FISCAL YEAR 1996: The $20,000,000 requested for FY 1996 will be used by in-house forces to perform the following activities:

	FY 1995	FY 1996
Preparedness Program		
Corps Statutory Authorities	7,700,000	8,700,000
Activities in Support of Others	4,100,000	5,300,000
Facilities	500,000	500,000
Inspections	700,000	700,000
Emergency Operations Activities	1,479,000	2,500,000
Rehabilitation Activities	500,000	2,300,000

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JUSTIFICATION OF ESTIMATES FOR CIVIL FUNCTIONS ACTIVITIES
Department of the Army, Fiscal Year 1996
Corps of Engineers

APPROPRIATION TITLE: General Expenses

	FY 1995 Appropriation	FY 1996 Budget request	Change
1. Executive Direction and Management			
a. Office, Chief of Engineers			
Baselevel Operating Expenses	$ 59,280,000*	$ 61,200,000	$ 1,920,000
Program Accounts**		7,000,000	7,000,000
Total		$ 68,200,000	$ 8,920,000
b. Major Subordinate Commands	75,410,000	78,125,000	2,715,000
2. Other Activities			
a. Coastal Engineering Research Board	310,000	320,000	10,000
b. Humphreys Engineer Center Support Activity	12,300,000	12,700,000	400,000
c. Water Resources Support Center	4,600,000*	4,760,000	160,000
d. Engineering Strategic Studies Center	600,000	620,000	20,000
TOTAL:	$152,500,000	$164,725,000	$12,225,000

* In keeping with the Administration's initiatives and the desires of ASA(CW) and the Chief of Engineers to reevaluate the role of the Headquarters and restructure accordingly, the policy review functions will be conducted only at the Headquarters level. To effect this functional realignment, the Washington Level Review Center (WLRC), formerly under the operational command and control of the Water Resources Support Center, was transferred to the Headquarters effective October 1994. The staff, consisting of 28 positions, and supporting General Expenses operating funds have been transferred from the Water Resources Support Center to the Headquarters.

** Included in the FY 1996 budget to direct-fund those Headquarters activities which were previously billed to benefitting Corps activities and Headquarters costs previously funded with other Title I funds which have been determined to be more appropriately funded by General Expenses. Those activities have been consolidated into Civil Program Accounts to be managed by the Director of Civil Works.

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APPROPRIATION TITLE: General Expenses

1. Executive Direction and Management

	FY 1995 Allocation	FY 1996 Request
a. Office, Chief of Engineers (OCE)		
(1) Baselevel Operating Expenses:	$59,280,000	$61,200,000
(2) Civil Program Accounts:		7,000,000
		$68,200,000

The Chief of Engineers is responsible for carrying out a comprehensive Civil Works Program. Implementation is decentralized throughout the Corps of Engineers in 36 districts, 11 major subordinate commands (MSC), and several field operating activities. The Office, Chief of Engineers assists field offices by providing program management, policy guidance, preparation of the annual budget and legislative submission, coordination, management of high interest or controversial projects or issues, and program analysis, and oversight.

The amount requested for the Office, Chief of Engineers for FY 1996 consists of two components: the baselevel operating expenses of $61,200,000; and Civil Program Accounts amounting to $7,000,000. The baselevel expenses amount reflects a modest increase over FY 1995 of $1,920,000. This funding level includes the transfer of the Washington Level Review Center (WLRC) from the Water Resources Support Center to the Headquarters, initiated in FY 1994 and fully effective in FY 1995 to consolidate policy review functions in one location at the Headquarters. The resource impacts of this functional realignment are a transfer of $2,900,000 and 28 FTE from WRSC to the Headquarters. The Program Accounts are a result of the transition, initiated in FY 1993, to eliminate Centralized Accounts. The formerly Centralized Account activities deemed necessary for continuation are being budgeted in the appropriation most appropriate for the specific activity. Those activities determined to be a Headquarters responsibility are budgeted in the General Expenses account and comprise the majority of the $7,000,000 requested for the Program Accounts. Also included in the Program Accounts are funds for the HQ Relocation Project. A description of each item in the Program Accounts will follow.

As the Corps has downsized during the period from 1989 through 1995, it has reduced executive direction and management staff at a greater rate than its field operating workforce. During this period the General Expenses (GE) funded workforce has been reduced by about 15% and the Headquarters portion of the GE workforce by about 24% while the field workforce has been reduced by approximately 7%. The reductions in the Headquarters have been accomplished by transferring operating functions to field organizations, streamlining processes and focusing Headquarters staff on the key functions of policy development and program development, management and oversight. Approximately 194 positions have been eliminated from the Headquarters during this period, of which approximately one-half have been transferred and one-half abolished. In FY 1995, 28 FTE were transferred from the WLRC to the Headquarters when the policy review function was consolidated into the Headquarters; however, a concurrent reduction of 27 Headquarters FTE in FY 1995 and an additional 5 planned in FY 1996 resulted in no net gain to the Headquarters from this consolidation. The centralization of policy review also enabled the reduction of additional positions in Division Offices during FY 1995. During FY 1994 and FY 1995, the ASA(CW) conducted a review of Corps roles and missions. The blueprint established by his review may result in additional restructuring decisions.

APPROPRIATION TITLE: General Expenses

1. **Executive Direction and Management** (Continued)

a. Office, Chief of Engineers (OCE)

The breakout of baseline and program account cost increases for the Headquarters is shown below.

Baseline HQ Increase	+ Program Accounts	= Total Increase	
$1,583,000		$ 1,583,000	- Personnel compensation and benefits cost increases.
28,000		28,000	- Rent, communications and utilities cost increases
64,000		64,000	- Travel and transportation cost increases.
218,000	7,000,000	7,218,000	- ADP, training and other contractual services cost increases.
27,000		27,000	- Printing and reproduction, supplies and materials
$1,920,000	$7,000,000	$ 8,920,000	

(1) Increase in Baseline Costs: Personnel costs are minimally increased for pay adjustments, within grade increases, contributions for retirement funds, and continuation of special pay rates for high cost areas. Communication costs reflect anticipated increased use of telecommunications and ADP, training and other contractual services associated with CEFMS implementation and the Defense Telephone Service-Washington's mandated conversion of telephone equipment from an analog to a digital environment. The $61,200,000 requested for baselevel operating expenses of the Office, Chief of Engineers, includes $46,288,000 for personnel compensation and benefits for civilian and military personnel, and $14,912,000 for other costs. Other costs include:

$ 2,194,000	- travel and transportation
973,000	- rent, utilities, and communications
927,000	- reproduction and printing, supplies and equipment
10,818,000	- ADP, training, and other contractual services
$14,912,000	

(2) Civil Program Accounts: The Civil Program Accounts were created primarily as a result of transitioning from using Centralized Accounts to fund Corps-wide systems and other programs to direct-funding in the most appropriate account. The FY 1996 GE budget request includes $7,000,000 for direct-funding those formerly centralized or other Title I funded activities determined to be more appropriately funded as executive direction and management activities. These items are categorized as automated information systems maintenance, updating and maintaining engineer guidance, long-term training and professional development, and unique mission requirements not internal to Headquarters operations, such as the Headquarters Relocation Project. A description of each of these categories and their cost follow.

APPROPRIATION TITLE: General Expenses

1. Executive Direction and Management (Continued)

a. Office, Chief of Engineers (OCE)

(1) Civil Program Accounts:

Automated Information Systems Maintenance:

Computer Aided Cost Estimating System (CACES) ($600,000): CACES is the single consolidated cost engineering system used by the Corps of Engineers. It is composed of the Unit Price database, and the Micro Computer Aided Cost Engineering System (MCACES) including its assoicated modules for risk analysis; dredging or projects utilizing marine plant and equipment; and assembly and model development. This system is used by all Districts in the preparation of all cost estimates for all projects to support the planning and design, project authorizations, budgeting, construction contract awards, construction modifications and operations an d maintenance. Furthermore, this interactive software provides a uniform system for development and review of cost estimates, collecting and archiving current and historical cost information and permits the transfer of data between Corps offices in a common hierarchial work breakdown structure. Funds in the amount of $600,000 are requested for FY 1996 to support continued usage, maintenance and development of the civil works portion of CACES to insure state-of-the-art capability and an up-to-date accurate database that clearly supports the government's position. The $600,000 represents the Civil share only; $600,000 is also being provided from the Military Programs budget of the Corps of Engineers.

Computer Aided Design and Drafting Center (CADD) ($650,000): In 1992, the former Army Corps of Engineers' Computer Aided Design and Drafting (CADD) Center, located at the Army Engineer Waterways Experiment Station (WES), was expanded to a Army, Navy, Air Force (Tri-Service) center, including the addition of Geographic Information Systems (GIS) technology, by a joint agreement between the Corps, the Naval Facilities Engineering Command, and the Air Force Civil Engineer to reduce duplication of effort between the three services in the use of CADD/GIS technology for facilities and environmental engineering. For FY 1995, the Army/Navy/Air Force portion was $2,400,000 an the Civil Works portion (from centralized accounts) was $650,000, for a total of $3,050,000. All Corps districts use CADD, GIS and computer mapping systems in the development, construction, operation and maintenance of Civil Works projects. The Center's work benefits all phases of Corps projects, including planning, real estate, design, construction, operations and readiness. The $650,000 requested for FY 1996 for the Civil Works portion will support approximately 1,100 workstations and 2,000 users of CADD/GIS technologies for Civil Works projects.

APPROPRIATION TITLE: General Expenses

1. Executive Direction and Management (Continued)

a. Office, Chief of Engineers (OCE)

(1) Civil Program Accounts:

Automated Information Systems Maintenance:

Data Integration System ($75,000): The Data Integration Program is designed to insure that the different Corps information systems use compatible data structures in order to maximize the exchange of data between systems. The Program establishes and implements the rules and mechanisms for the Corps-wide integration of data into the Command Data Model and Command Data Dictionary. The modernized systems will have a single work management structure (data will be entered at the source and there will be one source of data available) that integrates project/program management data with financial management, real property, contracting, logistics, and personnel data. Upward reporting will be a natural by-product of the systems, and manual reconciliation will diminish. FY 1996 integration activities will support (1) Finance and Accounting (CEFMS); (2) Real Estate (REMIS, RFMIS), (3) Contract Management (SAACONS), and (4) Human Resource Management systems. Data modeling and data integration (sharing) is mandated by DoD, in Directive 8320.1.

Equipment Manual EP 1110-1-8 ($300,000): The manual provides equipment ownership and operating costs for all types of manufacturers of construction equipment on an annual basis. The data is prepared from manufacturers equipment specifications and operation and maintenance manuals and represents the Government's only independent evaluation of total equipment costs that are not dictated by the construction industry. It is used in the preparation of all Corps cost estimates to support planning and design, construction contract awards, and construction modifications. It is specifically identified in the Federal Acquisition Regulation (FAR) Subpart 31.105 supporting the independent government estimate process and becomes a part of every Corps of Engineers construction contract. The $300,000 requested for FY 1996 will continue the Civil Works portion of the annual development of the equipment manual to insure that the data is accurate, up-to-date, and defendable in court to support the government's position in bid protests, claims, and appeals.

Real Estate System Support Center (RSSC) ($338,000): The RSSC consists of a central operations and maintenance support group to make changes to the corporate real estate systems for HQ/Divison/District requirements. Activities include life cycle planning, system change requirements, contract administration, systems security, communications hardware/software support, and ensure compliance with Corps information standards and architectures. This initiative reduces the overall costs of system maintenance and operations to each district and division. The center maintains the software and provides Divisions with a central location for assistance, training, and systems expertise. It eliminates the requirement for each Division to develop information management experts in REMIS, and reduces duplication of resources across the Command. Estimate cost avoidance of $120,000 per district or a total of $3.8 million annually.

APPROPRIATION TITLE: General Expenses

1. Executive Direction and Management (Continued)

a. Office, Chief of Engineers (OCE)

(1) Civil Program Accounts:

Automated Information Systems Maintenance:

Resident Management System (RMS) ($100,000): RMS is an automated system for contract administration and quality management which provides an efficient, labor-saving method to plan, accomplish and control construction projects. The system integrates job-specific requirements, corporate technical knowledge and expertise, as well as management policies that result in overall savings and establishment of quality standards. When permitted to complete development, RMS will have the capability to share data with CEFMS, AMPRS, PROMIS, and REMIS. It will be usable for all types of contracts administered by the Corps - Military, Civil Works, and Support for Others. The budget request of $100,000 represents only the Civil share. Over 100 Area and Resident Offices now use RMS. The RMS Technical Center of Expertise is at Fort Irwin, CA (Los Angeles District).

SPECSINTACT ($150,000): SPECSINTACT is an automated specification processing system that uses standard guide specifications for the preparation of facility construction projects. The system is designed for use by engineers, architects, specification writers, project managers, and construction managers for facility design and construction projects. The system has the flexibility and versatility to utilize personal computers which are widely used by USACE commands. It provides for quality assurance features to reduce man hours on verifying the accuracy of the items contained in specifications. SPECSINTACT is jointly owned by NASA, Naval Facilities Engineering Command, and the Army Corps of Engineers. Funds in the amount of $150,000 are requested for FY 1996 to assist field offices to come on line with the SPECSINTACT system. This assistance will be in the form of seminars, technical support, and related services.

Vehicle Information Management System (VIMS) ($46,000): VIMS is an automated system, mandated by federal law, which captures cost and performance data of motor vehicle fleets. This data provides fleet managers at all levels comprohensive management reports to use in making efficient and effective decisions concerning the costs and uses of motor vehicles. VIMS interfaces with the Corps of Engineers Management Information System (COEMIS) and requires integration with the Corps of Engineers Financial Management System (CEFMS) as that system is deployed. When fully implemented, VIMS will virtually eliminate all hard copy upward reporting by the field related to this subject.

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APPROPRIATION TITLE: General Expenses

1. Executive Direction and Management (Continued)

a. Office, Chief of Engineers (OCE)

(1) Civil Program Accounts:

Long Term Training/Professional Development:

Long-Term Training ($1,700,000): Corps of Engineers policy is to provide training and developmental opportunities to assure that civilian employees are kept abreast of current happenings in their career fields. Those training opportunities are (1) Mission Related Graduate Program - academic study in a discipline directly related to accomplishing the Corps mission; (2) Water Resources Planners and Project Managers Program - an 11-month internship for water resource planners, project managers, and other technical personnel involved in civil works project deevelopment; (3) Graduate Fellowship in Water Resources and Environmental Law - one year of study at the George Washington University; and (4) Coastal Engineering Education Program - provides coastal engineering specialists training on the forces which affect coastal projects.

Executive Development Program (EDP) for Engineers & Scientists ($300,000): The EDP for Engineers and Scientists is designed to prepare high potential employees in Career Program (CP) 18, Army Engineers and Scientists (Resources and Construction). The program's objectives are to identify, through Army-wide competition, individuals who possess the abilities to become successful managers and to provide them with the training and development to enable them to become successful mid and upper level managers. This program is necessary because approximately 80% of SES employees in CP 18 will be eligible for retirement by FY 1995.

Professional Development Assignments ($200,000): These funds are used to provide travel and per diem expenses for professional development opportunities for field personnel to work in various Civil functional areas within the Headquarters. Nominees for these assignments are submitted in accordance with guidelines provided in various Engineer Circulars, and are competitively selected. Assignments are for a minimum of 90 days, and primarily for 6 months to a year in duration in order to maximize their training experience. These assignments provide an opportunity for field personnel to gain from the Headquarters perspective, while the Headquarters likewise benefits from the field perspective.

Field Executive Development and Management Training ($400,000): These funds are provided to Division and District offices to support leadership and management training for high potential employees across all career fields, and includes classroom or other formal training, seminars, group training sessions, and various other media to ensure the greatest number of participants are permitted an opportunity to receive this training.

APPROPRIATION TITLE: General Expenses

1. Executive Direction and Management (Continued)

a. Office, Chief of Engineers (OCE)

(1) Civil Program Accounts:

Civil Works Guidance Maintenance Program (GUMP) ($1,250,000):

GUMP provides for maintenance activities on over 450 civil works engineering guidance documents. During FY 89-94 the Guidance Update Program developed or modified over 300 of these documents. Our current goals are to update each document on no more than a 10-year cycle, and to consolidate guidance documents in response to the recent management emphasis and executive order on reducing regulations. Periodic guidance revisions are necessary to incorporate statutory changes, revisions in USACE policy, and critical new technical developments. The majority of these documents establish management and technical policy. That portion of the guidance currently receives $1,500,000 from General Expenses funding for maintenance activities. The remainder of the documents provide general project guidance (e.g., guide specifications), which was previously funded through a centralized account. The requested $1,250,000 in GE funds for FY 1996 is for this portion of the guidance to provide field offices with engineering guidance for design of civil works projects. General project guidance consists of recommended design procedures and guide specifications content. This information is essential to efficient functioning of district design and construction activities. It simplies the design and review process. It improves construction methods based on lessons learned during previous construction contracts, thereby avoiding unnecessary project delays and contractor claims.

Headquarters Relocation Project ($700,000):

Design of the new USACE Headquarters building, which the General Services Administration (GSA) plans to construct at the Southeast Federal Center, commenced in August 1994. The Corps must fund certain building features which will not be borne by GSA. Such items include special, non-standard space configurations for such areas as the Emergency Operations Center and Secure Compartmental Information Facilities (SCIF), uninterrupted power supply, communications systems (including telephone and teleconferencing systems), cabling for the Corps of Engineers Automation Plan (CEAP) backbone and local area networks (LAN), and other requirements of a similar nature. In addition, systems furniture will be utilized to minimize space utilization and cost of future reorganization. Total estimated costs are $55,765,000 with $35,925,000 to be funded from PRIP and $19,840,000 to be funded from General Expenses and Operations and Maintenance, Army by the projected move-in date of FY 1998. The GE budgeted costs in FY 1996 are primarily for project management, review of space requirements, design review, and telecommunications/AV and relocation planning.

APPROPRIATION TITLE: General Expenses

1. Executive Direction and Management (Continued)

a. Office, Chief of Engineers (OCE)

(1) Civil Program Accounts:

Federal Geographic Data Committee (FGDC) ($200,000):

The Office of Management and Budget (OMB) Circular A-16, entitled "Coordination of Surveying, Mapping, and Related Spatial Data Activities," established the Federal Geographic Data Committee, which is chaired by the Secretary of Interior, to coordinate the Federal Government's geographic data activities. The Corps is a member agency and represents Civil Works, DoD's facilities, and environmental interest in geospatial data. In this regard, the Civil Works Directorate (as a FGDC steering committee member) coordinates with the Navy, Air Force, and the Army Chief of Staff for Installation Management to insure their interests are represented by the FGDC. Civil Works input into the creation of FGDC geospatial data policies, guidelines, and standards will lead to lower costs for Corps compliance germane to Civil Works projects. The budget request for FY 1996 is $200,000.

APPROPRIATION TITLE: General Expenses

1. Executive Direction and Management (Continued)

b. Major Subordinate Commands

FY 1995 Allocation	FY 1996 Request
$75,410,000	$78,125,000

Major subordinate commands (MSC) provide the managerial and technical direction required for supervision of subordinate district offices and coordination of regional activities necessary to execute the Civil Works Program. The Executive Direction and Management activities are currently decentralized to 11 MSC throughout the United States. The FY 1994 Energy and Water Development Appropriations Act prohibited the use of other than General Expenses Title I appropriations for Division Office executive direction and management activities, while permitting regionalized activities and operational activities performed centrally for economy and efficiency to continue. The MSCs project that they will transfer or eliminate approximately 53 FTE to comply and implement other initiatives such as the elimination of policy review. Since these changes will be implemented during FY 1995, the FY 1996 budget reflects only standard inflation of payroll costs, and costs associated with CEFMS implementation. Budget increases are listed below.

$ 2,140,000	- Personnel compensation and benefits cost increases
149,000	- Rent, utilities, and communications cost increases
130,000	- Travel and transportation cost increases
296,000	- ADP, training, and other contractual services cost increases
$ 2,715,000	

The $78,125,000 requested includes $58,040,000 for personnel compensation and benefits for civilian and military personnel, and $20,085,000 for other costs. Other costs include:

$ 5,979,000	- rent, communications, and utilities
3,520,000	- travel and transportation
1,678,000	- printing and reproduction, supplies and equipment
8,908,000	- ADP, training, and other contractual services
$20,085,000	

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APPROPRIATION TITLE: General Expenses

2. Other Activities	FY 1995 Allocation	FY 1996 Request
	$17,810,000	$18,400,000

Other activities include: the Coastal Engineering Research Board (CERB) which provides broad policy guidance, reviews plans and funds requirements for conducting coastal engineering research and development, recommends research project priorities, and performs other duties assigned by the Chief of Engineers; the Humphreys Engineer Center Support Activity (HECSA) which provides administrative support to Corps tenants of the Humphreys Engineer Center and to Corps headquarters; the Engineering Strategic Studies Center (ESSC) which provides analytical support for the Civil Works mission, and the Water Resources Support Center (WRSC) which provides a variety of water management functions such as conducting and managing national studies, special studies in support of the Civil Works mission, data collection and distribution, and technical support to other Corps offices in matters dealing with water resource management. In keeping with the Administration's initiatives and the desires of ASA(CW) and the Chief of Engineers to streamline the policy review process, the Washington Level Review Center (WLRC) was transferred to the Headquarters effective 9 October 1994; General Expenses funds and manpower were transferred from the Water Resources Support Center to the Headquarters at that time. Staffing levels for the policy review function have been reduced elsewhere in the Headquarters and MSC's to reflect the restructuring, and the labor and other cost savings are reflected in the budget request.

The amount requested for these activities for FY 1996 is $18,400,000 which is an increase of $590,000 from the FY 1995 allocation of $17,810,000. The net increases shown below represent normal inflation costs at the remaining activities, with the exception of the ADP category's increase to support fielding of the Corps of Engineers Financial Management System (CEFMS).

$ 407,000 -	Personnel compensation and benefits cost increases.
78,000 -	Rent, utilities, and communications cost increases.
6,000 -	travel and transportation of goods cost increase
15,000 -	reproduction and printing, supplies and equipment cost increases
84,000 -	ADP, training, and other contractual services cost increases
$ 590,000	

Breakdown of the total $18,400,000 request for the remaining activities includes $9,942,000 for personnel compensation and benefits for civilian and military personnel and $ 8,458,000 for other costs. The other costs include:

$ 4,853,000 -	rent, communications, and utilities (includes HQ payments also)
206,000 -	travel and transportation of goods
515,000 -	reproduction and printing, supplies and equipment
2,884,000 -	ADP, training, and other contractual services
$ 8,458,000	

APPROPRIATION TITLE: REVOLVING FUND - PLANT REPLACEMENT AND IMPROVEMENT PROGRAM (PRIP)

1. Explanation of Revolving Fund. The Revolving Fund, which was established by Congress in 1953 (Public Law 153, 83rd congress - 67 Stat. 199), replaced the Plant Allotment Account authorized by the Secretary of War, on 13 December 1934, which had in turn replaced the Plant Program - Appropriation Basis which was in use prior to 1934. The two systems, prior to the establishment of the Revolving Fund, did not prove to be successful, because the accounting procedures necessitated by the systems were cumbersome and resulted in a distorted picture of costs when plant was transferred from one appropriation to another.

Essentially, PL 153 provided that the Revolving Fund assume the total capital value of $127.9 million in 1953, consisting of the unexpended cash balance ($25.3 million) and the net value ($102.6 million) of the assets and liabilities of the plant accounts; and to perform all future services, as a separate entity, within its own resources. The Plant Replacement and Improvement Program of the Revolving Fund, or PRIP, has proven to be an effective means of providing equipment and materials needed on more than one project. Some advantages of the system are: (1) Simplifies funding and accounting procedures; (2) Provides a means for plant rental which considers plant replacement costs; (3) Eliminates distorted project costs when plant is not used entirely on a single project throughout its economic life; and (4) Permits plant to be available on a timely basis to meet changing workload requirements.

The concept of the Revolving Fund is for it to operate within its own resources, rather than from annual appropriations. The Fund owns all the land, structures, dredges, other floating plant, aircraft, fixed and mobile land plant, tools, office, furniture, special equipment, and computers, that serve two or more Civil Works projects. In order for the Revolving Fund to acquire and replace the above items, it is necessary that the user project or appropriation be charged a fee for the actual time the equipment is used. This fee consists of operating and fixed costs. The operating costs are reimbursed to the Revolving Fund without any surcharge. The fixed or capitalized costs include depreciation, based on the straight-line method and a plant replacement increment factor to provide for future increased costs of replacement items due to inflation. Two additional sources of income to the Revolving Fund are the sale of surplus items and, when planned expenditures exceed the income producing capability of the Fund, direct appropriations. For FY 1994, total income was $109,707,000. The income from depreciation and plant increment was $72,921,000 and $35,231,000 respectively. The remaining $1,555,000 was from the sale of surplus equipment. When the Revolving Fund was established, Congress authorized a capital limitation or ceiling (Corpus) of $140.0 million for the Fund. The capital value or corpus is the total assets, less liabilities and reserves. The $140.0 million ceiling was adequate until 1965, when increased workload and inflation required that the Corps of Engineers request annual increases in the corpus ceiling. These requests were generally granted. The limitations on the corpus ceiling value limited the income that could be generated from plant rentals which, in turn, adversely affected the overall management of the Fund. Therefore, the Corps recommended that an annual capital expenditure ceiling be substituted for the corpus ceiling. Congress granted the request in FY 1979. Starting with FY 1985, expenditures ceilings were replaced by estimates of expenditures. Starting in FY 1994, the Corps replaced the estimate of expenditures by an estimate of obligations. This was done in accordance with recommendations of the General Accounting Office concerning the Corps change to obligations accounting within the Revolving Fund. New obligations in FY 1996 are estimated at $93,000,000.

2. The Revolving Fund is operated in the Divisions, Districts, and separate Field Offices, the Waterways Experiment Station, and the Cold Regions Research and Engineering Laboratory. The fund incurs the expenses of acquisition, rehabilitation, operations, and maintenance of multiple use structures, such as warehouses, shops, garages, and laboratories; the expenses of acquisition, rehabilitation, operations, and maintenance of general-purpose plant, such as dredges, tugs, launches, trucks, cranes, bulldozers, and other construction equipment; and the general expenses of District offices.

3. FY 1995 and FY 1996 (Items costing $700,000 or more)

a. Land and Structures:

1. Analytical Laboratory Facility - Waterways Experiment Station (New). Beginning in 1972, the Analytical Laboratory at WES provided water quality analysis in support of the Corps environmental quality, wastewater management, and dredged material research programs. Since then, demand for analytical chemistry and methods research has expanded significantly, especially the demands for high hazard research (i.e., dioxins and dibenzofurans) for construction and operations projects. The existing 8000 square foot facility is undersized and not equipped to support an expanding Corps environmental mission. Present facilities necessitate the transportation of samples between buildings which increases the probability of spills and contamination problems. Also there is

potential for non-compliance with safety and environmental requirements for disposal of samples. A new analytical chemistry facility is needed with the capability for accuracies in the parts per quadrillion with separate ventilation systems and a "clean room" operation and with segregated waste stream collection, handling and pretreatment prior to disposal. These capabilities are required for health and regulatory risk-based hazard assessments. The proposed facilities will provide 20,000 square feet of space with a state-of-the-art analytical chemistry laboratory, modern organic and inorganic analysis laboratories, high hazard (dioxin, radiation, and chemical agent) laboratories, quality control laboratory, and will eliminate current logistics hazard of sample transfer between buildings and allow for disposal of samples with methods in compliance with safety and environmental requirements. Preliminary design (25%) is complete. An economic analysis was conducted on three scenarios, including status quo, leasing, and construction of a new facility, with the new facility providing a savings to investment ratio of 4.74 and a discounted pay back period of 6.5 years. No Corps,and few commercial, facilities exist to perform methods development research and analysis of dioxin, radiation and other extremely hazardous and toxic materials. Without these facilities, the Corps' cost of doing business for environmental related missions will escalate. Similar impacts, i.e. increased costs, can be expected for any analysis requiring "clean room" facilities , radiation analysis and chemical agent research. Also, if construction is delayed significantly, timely environmental and high hazard remediation assessments will be hindered. Total estimated cost: $6,500,000. FY 1996: $692,000 to start and complete design. FY 1997: $ 2,500,000 to start construction. Future Years: $3,308,000 to complete construction.

(2) Clock Tower Building Additions and Betterments - Rock Island District (Continuing): The Clock Tower Building was constructed in 1865, occupied by the Corps in 1934, and has been a Corps owned facility since 1941. Some renovations were started on the third floor in 1983 however, no major renovation work has been accomplished in this facility for over 50 years. Renovation efforts will include the insulation of exterior walls to meet energy conservation goals; installation of new energy efficient air handling equipment; removal of asbestos insulation from pipes, ducts and flooring; and lowered acoustical ceilings with new lighting to reduce the 15 foot high existing ceilings and to provide adequate lighting for an administrative office environment. Restrooms will be modified to be handicap accessible and modern water saving fixtures will be installed. The existing wooden stairway will be restored to meet current fire codes and will include installation of fire-resistant walls and flooring, self-closing fire rated doors and frames, smoke and heat detectors and emergency lighting. All of the proposed modifications are minimum essential requirements to correct known deficiencies and provide adequate working conditions for Corps employees. Total estimated cost: $1,002,000.

Through FY 1995: $175,500 to start design and construction. FY 1996: $433,500 to continue design and construction. FY 1997: $220,000 to complete design and continue construction. Future Years: $173,000 to complete construction.

(3) Additions and Betterments to Building 8000 - Waterways Experiment Station (Continuing): Additions and betterments to the Jamie L. Whitten Building, which houses the Information Technology Laboratory at WES because of the greatly expanded information management mission. The number of information management employees is three times the number which was used to design Building 8000. The added space will be used for CEAP Central Processing Center support, CADD Center support, WESNET Fiber Optics Communications network support, office and equipment for supercomputer support, and Scientific Visualization support. The current inability to locate certain personnel and facilities in Building 8000 causes delays and hardships for scientists and researchers attempting to meet urgent mission requirements. Total estimated cost: $5,000,000. Through FY 1995: $400,000 for design. FY 1996: $1,900,000 to initiate construction. FY 1997: $2,700,000 to complete construction.

(4) Headquarters USACE Building-Systems Furniture and Other Features Not Provided by the General Services Administration (Continuing): The new USACE Headquarters building which the General Services Administration (GSA) plans to construct at the Southeast Federal Center, will be designed for systems furniture, both to save space and costs and to permit flexibility and economy whenever future reorganization or similar change necessitates reconfiguration of office space. In addition to the furniture, the Corps must fund the costs of necessary building features which will not be borne by GSA. Such items include all special space configurations to suit Corps requirements, all communications systems (including telephone and teleconferencing systems), all cabling for computer networks and the Corps of Engineers Automation Plan (CEAP) backbone, special treatments for such areas as the Emergency Operations Center, uninterrupted power supply, and other requirements of that nature. Total estimated cost: $20,000,000. Through FY 1995: $5,000,000 for design and to initiate construction. FY 1996: $5,000,000 to continue construction. FY 1997: $10,000,000 acquire systems furniture and furnishings.

(5) Renovation - Division Laboratory - South Pacific Division (Continuing): The South Pacific Division operates a multi-purpose laboratory for soils, rock mechanics, geologic, concrete and materials, water quality and environmental testing. The laboratory conducts sophisticated and essential testing operations in a primitive wood frame shipyard facility constructed during World War II. In its current state the building violates numerous building and life safety codes. The dilapidated state of the structure compromises quality control of many environmental tests conducted at the laboratory. The

renovation will eliminate safety violations in the areas of dust control, excessive noise, electrical system overloads, fire exits, and asbestos hazards. The replacement of the roof, siding, and windows and the installation of insulation will reduce energy usage in the laboratory as well as building maintenance costs. Because of the magnitude of renovation required, the Division analyzed other options including relocation and new construction. Renovation of the current laboratory facility was found to be the least costly alternative for correcting the difficulties. Total estimated cost: $3,216,000. Through FY 1995: $3,106,000 to continue design and construction. FY 1996: $110,000 to complete design and construction.

b. Dredges

(1) Dredge McFARLAND Rehabilitation - Philadelphia District (NEW): The U.S. Hopper Dredge McFARLAND is one of four Corps sea-going hopper dredges which comprise the Minimum Fleet authorized by PL 95-269. Homeported in Philadelphia, PA, the McFARLAND is the Minimum Fleet dredge assigned to the Atlantic Coast and is used to maintain Atlantic and Gulf Coast ports and harbors. The McFARLAND was built in 1967 and has not undergone any major alterations since being placed in service. The Dredge McFARLAND rehabilitation will modernize and increase the effective production of the dredge, and involves: (a) the repowering of the propulsion and dredging equipment to improve operational efficiency and reduce stack emissions; (b) the automation of engine room, dredging, and navigation equipment to reduce manpower; (c) structural modifications to increase production capabilities; (d) modernization of equipment components to maintain system reliability; and (e) utilizing research technology transfer products to improve overall dredging operations, methods, and practices. The rehabilitation will also help to ensure the vessel's responsiveness to restrictive environmental windows at various dredging locations. While the rehabilitation will be initiated concurrent with the scheduled annual maintenance, the McFARLAND will be out service for the entire duration of its normal dredging season. The Corps will coordinate with the dredging industry to ensure adequate industry capability is available to accomplish all maintenance dredging normally assigned to the McFARLAND while it is out of service. The Corps will also monitor industry performance to ensure that all required maintenance dredging is accomplished and will consider the performance by industry during this period in its review of the continuing requirement for the McFARLAND as part of its minimum dredge fleet. Total estimated cost for rehabilitation: $8,000,000. Through FY 1995: $435,000 for engineering and design. FY 1996: $7,465,000 for shipyard rehabilitation. FY 1997: $100,000 for completion of work and final contractor payments.

c. Other Floating Plant:

(1) Gate Lifter Crane (Derrickboat) - Louisville (New). The Ohio River and its tributaries provide over 2500 miles of navigable channel. About 240 million short-tons in 1990 were moved by barge traffic on the Ohio. The system includes 60 navigation lock and dam facilities which range in age from 10 to 150 year. Since 1960, system-wide tonnage has more than doubled. This increased usage also results in increasing maintenance needs, closure costs have become higher and disruption to lock users is becoming more significant. Presently, repair and maintenance can typically involve replacement of miter and quion contact blocks, replacement of pintles and gate painting. The whole process to allow this involves dewatering the chamber, jacking the gate "in-place" with temporary structural support, doing the repairs or maintenance "in-the-dry", and then realignment of the whole gate to within 1/8 inch tolerances. This is tedious and time-consuming. Currently, doing both ends of the lock totals 35-42 days which involves trimming all time to the bare minimum using specialized equipment. Only marginal further reductions in overall closure time are possible using the current process. Navigation accidents can potentially require complete replacement of gate leaves. Presently, no spares are available and a new gate takes 3-6 months to fabricate. Fourteen options were considered. The selected option changes the whole process. It involves swapping gates and then doing gate work away from the lock chamber. To implement this change, each lock requires the following: purchase of one pair of spare gate leaves; design and construction of storage and work areas for spare gates; design and modification of miter and quion contact blocks and wall quion contact blocks to quicken repairs and alignments; modification of existing gates to allow lifting by cranes; and, modification of the existing gate anchorages to allow faster gate removal. To actually swap the gates, Louisville District will purchase a 700 ton barge-mounted gate-lifter crane to be shared by all locks on the Ohio River or elsewhere as needed. For scheduled major repairs, the closure time savings per lock per event will be 20 to 25 days with the new process. An economic model computed system wide transportation savings from implementation of the selected option. The costs include the crane and all modifications for the gate-change-out capability at the locks. The net benefits are about $13 million annually for a 50 year project life. The benefit/cost ratio is 4.0. A crane with the versatility and capacity needed cannot be rented. The crane will be purchased by a competitive proposal process with a design/build contract. This should allow crane manufacturers to propose standard equipment meeting our specifications. Particular emphasis is placed on compatibility with the unique features of the structures served during its 50 year life. To insure this, a team of experienced personnel will develop performance and evaluation criteria. Over 25% of the design effort will be complete by the end of FY 1994. Total estimated cost: $13,500,000. Through FY 1995: $500,000 for design. FY 1996:

$6,500,000 to complete the design and initiate construction. Future years: $6,500,000 to complete construction.

(2) Crane Barge No. 1 Replacement - St. Louis (New). Crane Barge No. 1 with Crawler Crane/Dragline is used at the locks and dams on the Mississippi River for repair work such as placing stone in scour areas, replacing worn out machinery, and assisting in miter gate changes. Often this repair work is performed under emergency conditions requiring a quick response. The barge/crane unit is also used at the Service Base for repair work on lock miter gates, the Dredge POTTER and attendant plant, and other floating plant. The crane barge is towed by the towboat GRAND TOWER to work locations. Other work involves drift removal at the locks and dams and the Service Base. The existing barge is 36 years old and the dragline/crane is 19. The original hull plating on the barge is thin due to its age and wear and tear from years of use around the locks and dams. All major components on the crane are original and failure can be expected at any time. Gears are heavily worn and the engine is consuming an excessive amount of oil. Continued need exists for the barge/crane unit. A standard design crane barge is currently being developed by the Marine Design Center for use in several Districts. It is planned to use this vessel indefinitely. The hourly rate for the new vessel has been calculated to be $130/hour. The existing rate is $115/hour, but the new vessel will have increased capacity for lifting operations which will increase its efficiency. The economic analysis shows that acquisition of a new barge will save $607,000 over the life of the new barge when compared with the costs of operating and maintaining the existing one for a similar period of time, given its age and deteriorated condition. Total estimated Cost:$1,705,000. Through FY 1995: $80,000 to complete design and start construction. FY 1996: $465,000 to continued construction. FY 1997: $1,150,000 to continue construction. Future Years: $10,000 to complete.

(3) Replacement Fuel Oil Barge 6011 - Vicksburg District (Continuing): Revetment and Dredging operations in the Lower Mississippi Valley Division consist of numerous pieces of floating plant and mobile land plant that are operated by diesel engines. The diesel engines drive boats, winches, generators, water pumps, cranes, draglines and other auxiliary equipment necessary for the operation of revetment and navigation on the Mississippi River and its tributaries. Five barges are currently providing over 1,000,000 gallons of fuel capacity to the revetment operations and dredging. The fuel is purchased in bulk through Defense Logistics Agency, stored in Corps barges, and then transported to the various locations of the revetment fleet up and down the Mississippi River (many miles apart). These barges are currently adequate for revetment and dredging operations however, the existing complement of fuel barges are not double hulled. Barge 6011 was built in 1950 and has never been replated. Its fuel capacity is approximately 500,000

gallons. The Oil Pollution Act of 1990 (OPA-90) requires that all barges constructed after 1990 have double skinned hulls. Furthermore, OPA-90 requires that existing single hulled fuel barges be phased out over 12 years. OPA-90 requirement applies to all Corps fuel barges that are used on navigable waterways. Several alternatives have been reviewed to include maintaining the status quo; renting or leasing substitute barges; modifying existing barges; vendor delivered fuel oil and acquiring a replacement barge. Analysis of these alternatives indicates acquisition of a replacement barge is the most economical and cost effective solution. Total estimated cost: $1,050,000. Through FY 1995: $550,000 to complete design and initiate construction. FY 1996: $500,000 to complete construction.

(4) Motortender Replacement - Nashville District (Continuing): A replacement vessel is required for the tender GALLATIN which was built in 1947 and is rapidly approaching the end of its economic life. In the years since its arrival in the Nashville District, the M/T GALLATIN has undergone numerous major overhauls and upgrades to keep up with the demands of a changing workload. The increase in the size of floating plant items over the years has placed greater strains on the tender resulting in more "down" time for repairs. Many major components have surpassed their expected life spans and failed. The average size of today's normal tow, not including the towboat, is in excess of 500 feet long and 60 feet wide. Frequently, commercial barges are used to transfer rip-rap stone or fill material for mooring cells. These commercial barges are 195 feet long by 35 feet wide and carry up to 1,400 tons of material. The existing M/T GALLATIN is undersized to safely handle tows and barges of this size. In addition to handling tows, the replacement motor tender will also support dredging operations which is a major responsibility of the district's Plant Unit. A primary function during dredging operations is handling two 300 cubic yard scows, switching and dumping them as needed. The GALLATIN is restricted in its ability to maneuver a load by its small rudder and lack of horsepower. In the future, material will have to be taken further and further from the dredge site to be disposed. A vessel is needed that has significant size and horsepower to travel these distances in a reasonable amount of time. Two towboats, the M/V IROQUOIS and the M/V WARIOTO assigned to the district fleet, are too wide to make up a tow and too large and cumbersome for dumping scows. Both of these vessels draft over six feet of water and require vertical clearances over thirty feet above the waterline which makes them unsuitable as substitute motor tenders. The M/T GALLATIN fills an important role in the district's fleet. It provides an alternative to using a large, deep-draft vessel in confined areas or shallow waters. A tender boat furnishes an economical alternative to a full sized towboat for small tasks like; single barge handling; making-up tows; assisting in lockages; and dumping scows. A tender boat is an essential element in sustaining the flexibility needed to meet changing and varied needs for maintaining the Tennessee and Cumberland River Navigation systems. Total estimated cost: $1,700,000. Through FY 1995: $1,600,000 to complete design and

initiate construction. FY 1996: $100,000 to complete construction.

(5) Replacement Towboat - Mobile District (Continuing): A replacement vessel is required to push a recently acquired floating crane and to provide quarters for its crew of five. The combination floating crane and towboat will replace a like combination which until recently was being provided by a navigation maintenance contractor. This replacement towboat when used in conjunction with the newly acquired floating crane will support lock repairs, snagging and other maintenance missions on multiple projects of the Columbus Area Office. The current towboat is being furnished under a cost plus award fee contract arrangement. Under the present leasing agreement, the basic lease cost and all maintenance costs are paid by the Corps. In addition, a fixed base award fee, an incentive award fee and the cost of home office overhead are also incurred by the Corps. The acquisition of a replacement towboat would relieve the Corps of the base award, incentive award and overhead costs. Cost avoidance in the first year with a replacement vessel will exceed $33,000. Future savings would vary with inflation, however, the cost advantage of Corps ownership would continue to be very substantial. The acquisition plan for this replacement towboat will utilize the two step procurement developed for procurement of an identical vessel for the Vicksburg District. This replacement towboat for the Mobile District will be an option item in the procurement process. Total estimated cost: $3,700,000. Through FY 1995: $3,600,000 for design and to start construction. FY 1996: $100,000 to complete construction.

(6) Towboat Replacement - Little Rock District (Continuing): A replacement towboat is essential for timely response in emergency situations, to increase number of days of maintenance, to operate during periods of high river flows, and to reduce Industrial Delay Cost. The existing towboat PINE BLUFF is a twin screw boat built in 1970 prior to the opening of the Kerr-McClellen Arkansas River Navigation System and is powered with two 230 horsepower diesel engines. Experience has shown this vessel to be greatly under sized and under powered to cope with the high river flows and to meet the assigned mission in a safe manner. The Little Rock District has little or no ability to meet emergency situations or to reduce potential damage resulting from marine accidents and flood conditions. The proposed replacement towboat would have rated engine capacity of approximately 1800 horsepower, which would allow operations during times of high flows when most maintenance problems and emergency conditions occur. This would reduce the number of potential nonproductive days from 103 to 12 per year. Based on an economic life of 30 years for the replacement vessel and an annual interest rate of 8.25%, the Benefit to Cost Ratio is 1.81 to 1.0. This replacement is expected to save $1,014,700 in non-productive time, $491,800 in reduced per diem cost, $4,235,600 in industry delay costs, and $85,000 in costs to rehabilitate the present vessel. Total estimated cost: $3,240,000. Through FY 1995:

$90,000 to initiate design. FY 1996: $230,000 to continue design and start construction. FY 1997: $2,070,000 to continue design and construction. Future Years: $850,000 to complete design and construction.

(7) Replacement Spud Barge/ Crawler Crane - New Orleans District (Continuing): A Spud Barge/ Crawler Crane is required as a floating platform and dragline for repair operations on navigational water of the New Orleans District. The unit will replace Barge CE-587 which is 64 years old and Crane CE-628 which is 20 years old. Both are beyond major repairs, inadequate for safe operations, and unreliable. If a new Spud Barge/ Crawler Crane are not acquired, it will be necessary to rent the equipment at an estimated cost of $1275 per day. At this rate the equipment could be paid for in only 5.4 years. Total estimated cost: $2,940,000. Through FY 1995: $1,380,000 to complete design and initiate construction. FY 1996: $1,360,000 to continue construction. FY 1997: $202,000 to complete construction.

(8) Replacement for Patrolboat - St. Louis District (Continuing): The Patrolboat PATHFINDER is a 34 year old multipurpose vessel used for channel patrol work as well as towing the derrickboat SEWELL, spare miter gate barge and fuel barges for the Dredge POTTER. It is the only vessel of this type in the St. Louis District. The vessel is underpowered for future requirements including towing the SEWELL and the newly acquired spare miter gate barge. In addition, the PATHFINDER will likely require rehabilitation of major systems within the next few years, including replacement of the engines, and electrical and mechanical systems such as the generator sets, steering mechanism, and heating and cooling systems. It is also possible that the hull, which was last replated in 1981, will require replating in the same time frame. Total estimated cost: $2,288,000. Through FY 1995: $2,278,000 to complete design and continue construction. FY 1996: $10,000 to complete construction.

(9) Replacement Survey Boat - Norfolk District (Continuing): A 65-foot survey vessel, capable of operating in the Chesapeake Bay and its tributaries and offshore on the Virginia Coast, is needed by the Norfolk District as a replacement for the 30-year old survey boat ADAMS, which has reached the end of its economic life. It is essential that the new vessel be placed into service before the ADAMS deteriorates to a point where it is unable to perform its functions safely and effectively. The vessel operates 250 days a year in order to perform surveys on the deep draft channels of Hampton Roads, James River, and Chesapeake Bay. Due to the long distances to work sites and its slow speed of 8 to 10 knots, many man-hours of work are lost to travel time. Further, the potential for breakdown combined with its low speed, jeopardizes the safety of personnel, especially when encountering fast-moving severe storms. The execution of the Norfolk District

dredging program requires accurate and timely surveys. These surveys are used for contract payments, disposal area management, shoaling analysis, budget preparation, project condition surveys and other types of oceanographic studies. Total estimated cost:$1,667,000. Through FY 1995: $1,567,000 to complete design and initiate construction. FY 1996: $100,000 to complete construction.

(10) Replacement Survey Boat - New York District (Continuing): A 65 foot survey vessel, capable of operating in the sea water, is needed, as a replacement for the survey boat HATTON, which was built in 1960 and has reached the end of its economic life. It is essential that the new vessel be placed into service before the HATTON deteriorates to a point where it cannot perform its functions safely and effectively. The plating on the HATTON has already rusted to half its original thickness at various places. The cost of operating the HATTON will increase dramatically in the next few years as electrical, hull, deck and structural replacement becomes necessary. More frequent breakdowns are expected. To monitor ocean dumping in accordance with Criteria in the Marine Protection, Research and Sanctuaries Act of 1972 (Ocean Dumping), and with the proposed MOA between EPA-USACE, the Corps requires a faster and more effective boat than the HATTON, a vessel capable of operating in higher than normal sea states is necessary. If the HATTON is not replaced, it will seriously impact the ability of the New York district to fulfill its mission of maintaining the Federal channels under authority of the River and Harbor Acts. Total estimated cost: $1,600,000. Through FY 1995: $1,500,000 to start design and initiate construction. FY 1996: $100,000 to complete construction.

d. Fixed Land Plant:

(1) Video Teleconferencing - Corps-wide (New). The Corps carried out a pilot test of a video communications network to determine the feasibility and advantages of establishing a Corps-wide network, and has implemented a network consisting of the headquarters and each Division office. The primary purposes for a video communications network are increased efficiency, improved communications, and enhanced productivity through greater access to technical experts when and where they are needed. Studies in connection with the pilot test show that a video communications network could save up to 9% of travel costs. Installation at the Headquarters and all major subordinate commands without access to video conferencing owned by other government agencies has been justified independently of the Corps-wide network and was accomplished as a minor acquisition in FY 93 and FY 94. The Corps has developed and disseminated guidance to insure cost effective use of existing video conferencing capability and to facilitate the determination of additional requirements based on increased efficiency, specifically savings in travel and other costs. The Corps is also testing use of less costly phone lines for video

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transmission to substantially reduce video conferencing line charges. Total estimated cost: $1,857,000. Through FY 1995: $420,000. FY 1996: $450,000. FY 1997: $550,000. Future years: $437,000.

(2) Global Positioning Systems - Corpswide (Continuing): This is a grouped item request being presented for the first time to indicate overall Global Positioning System (GPS) equipment requirement. There are no single costs in excess of $700,000. Existing positioning systems (range-range, range-azimuth) are more expensive to purchase and operate than equivalent GPS systems. In addition, many of the older survey systems are currently in need of replacement or are reaching a point where the increased costs of maintenance and repair cannot be justified. Positioning systems support functional areas that require surveying, mapping and collection of spatial data including operations, planning, regulatory functions, and others. The acquisition of GPS equipment will prove a significant improvement in accomplishing the Corps Civil Works mission. GPS equipment and systems incur less operational cost than older systems and project surveys can be accomplished in less time. Savings in personnel and time required for survey operations are estimated at 25% per job. Since the Corps spends $40 million each year on hydrographic surveys in support of dredging alone, it is conservatively estimated that the Corps will save more than $10 million per year from the use of GPS equipment to accomplish its surveying and mapping requirements. Total estimated cost: $9,000,000. Through FY 1995: $3,000,000 to initiate acquisition. FY 1996: $2,000,000 for additional acquisitions. FY 1997: $2,000,000 for continuing acquisitions. Future Years: $2,000,000 for acquisitions.

(3) Information Systems Modernization Program (ISMP) - Corpswide (Continuing): The ISMP looks at all major software systems used in the U.S. Army Corps of Engineers with the goals of reducing data collection, verification and processing costs; reducing systems design, development and maintenance costs; and improving the accuracy, completeness, availability, timeliness and usefulness of information for operational users and decision makers, at all levels and across all functional USACE boundaries. To meet these goals, the Corps redesigns the systems which do not meet current information needs, eliminates redundant and/or unnecessary systems, combines systems with similar functions, and integrates all systems to minimize duplicate data entry and maximize data sharing. The ISMP draws on the knowledge and experience of functional users and the expertise of information management specialists to provide USACE with a new information systems infrastructure that will support the mission of the Corps well into the next century and is consistent with hardware and communications capabilities of the Corps of Engineers Automation Plan (CEAP).

(a) Corps of Engineers Financial Management System (CEFMS). CEFMS is an advanced interactive, real-time, direct data entry, relational database financial management system, which is at the heart of the ISMP. In addition to virtually eliminating duplicate data entry and streamlining data validation, it will be a primary source of data for all other modernized systems. The Corps estimates that CEFMS will pay for itself approximately two and a quarter times over its 10 year life, primarily as a result of workforce savings due to direct data entry, the reduction of duplicate data entry, validation of data at the entry point, and on-line real-time query capability. Total estimated cost: $45,500,000. Through FY 94: $23,400,000, from centralized account funding. FY 95: $6,552,000 for continuation of deployment. FY 96: $6,022,000 for continuation of deployment. FY 97: $1,367,000. Remaining requirements will be programmed in future years:

(b) Program and Project Management Information System (PROMIS). PROMIS will incorporate and replace existing program and project management systems to provide a single source of information for all programs and projects managed by field commands. The economic analysis will be updated early in FY 94, however, original estimates of savings were $60 million over the life of the system. Total estimated cost: $10,316,000. Through FY 95 $8,588,000. FY 96: $1,728,000 for completion of systems development and deployment.

(4) Communications Upgrade and Replacement Program (Continuing): This grouped item request has been presented since FY 1985 to indicate the overall radio communications annual requirements. There is no single item with costs in excess of $700,000. The Corps of Engineers civil works telecommunications resources include radio communication systems and digital PBX systems which are used to perform specific communication functions in support of Corps projects and programs. These systems include fixed, floating plant, and vehicular stations which operate in the high frequency (HF) band for long haul communications; the ultra high frequency (UHF) band for fixed station, mobile and vessel communications for point-to-point communications; and, the microwave band for multichannel radio relay communication. A large percentage of these systems/networks have remained operational up to this point in time through the incremental replacement of components within the systems. In addition, the relocation of Corps activities into and within many GSA operated facilities have generated requirements for replacement of existing telephone systems. To insure continuity and the continuing operational capability of these systems, acquisition of replacement systems with the appropriate composition, design and capacity is continuing. Through FY 1995: $45,500,000. FY 1996 Requirement: $2,000,000.

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(5) Water Control Data Systems (WCDS) (Continuing): Equipment acquired under this category is used to collect, process, analyze, and display hydrologic data for the regulation of water resource projects consistent with authorized project purposes including hydropower generation, navigation and flood control. The data collected is used to make daily regulatory decisions for retention and discharge flow rates for more than 500 water resource projects that include lakes, locks, diversion, and other control structures. The process of collecting, evaluating, and distributing data must be accomplished in a timely manner to effectively support authorized projects effectively. Equipment acquired under this category includes dedicated WCDS computers, measuring devices and telecommunications facilities, display devices, standby power supply facilities, and weather data acquisition equipment. The total estimated cost of the current 5 year replacement program is $7,500,000. Through FY 1995:$6,000,000. FY 1996 Requirement: $1,000,000. Future Years: $500,000.

(6) Computer-Aided Design and Drafting Equipment (CADD) (Continuing): Due to the increasing role of CADD and continual improvements in hardware and software, CADD cannot be considered a one time capital investment. It requires timely upgrades and replacements of obsolete and outdated equipment. This includes hardware and software necessary for preparation of engineering drawings, project master plans, topographic data, etc., on projects such as dams, reservoirs, coastal and flood protection, and navigation structures. CADD Systems may include from 1 to 16 work stations, linked to a central mini-computer, complete with keyboard, digitizing tablet, and video display. Printers, plotters, and other peripherals may be shared between work stations. A Corps-wide contract for acquisition of CADD equipment was awarded in September 1987. By FY 1990, 36 Corps Field Offices will have purchased CADD systems through the contract. Corps-wide acquisition of CADD maximizes economies of scale benefits. CADD systems in the engineering and construction industry are evolving at an ever-increasing rate. Presently a cost effective tool for producing contract documents, the trend in CADD is to make drafting a by-product of the design process. Utilizing database technology, CADD is fast becoming a viable method of tracking project features from the planning stage into design and construction, and on through operation and renovation. The use of CADD linked to a project database is an important move towards a life-cycle approach to project management. With manpower levels unlikely to improve and a wide variety of new requirements being placed upon us, computer systems must increase employee productivity. Computer aided design and drafting provides an average manpower efficiency ratio of 3.5 to 1 and a benefit to cost ratio of 1.3 to 1. With advancements in design and database software, this benefit ratio will improve. Estimated Total Capital Acquisition Cost Through FY 1995: $41,500,000. FY 1996 Requirement: $3,000,000.

(7) Corps of Engineers Automation Plan (CEAP) (Continuing): The capital acquisition portion of CEAP was created to replace the Corps mainframe computing hardware consisting of leased Honeywells at the division level and Corps owned Harris computers at the district level. The Corps awarded a contract to the Control Data Systems, Inc. in October 1989 for hardware/software acquisition and support services. The contract was structured for maximum flexibility, not committing the Corps beyond the first year but providing the Corps with 10 annual renewal options. The contract also provided for a pilot test at the Southwestern Division, the Waterways Experiment Station, and the former Headquarter's Engineer Automation Support Activity. Based on pilot and stress test results and a cost comparison of various deployment scenarios, the Corps redeployed pilot test equipment to two large regional processing sites, one in Portland, Oregon and the other in Vicksburg, Mississippi. To maintain a viable corporate-wide system at these two regional sites, the Corps has invested in additional mainframe processing capacity, operating software, additional storage capacity, communications devices, and associated processors to link all Corps sites to the two regional centers. Total estimated cost through FY 1999, $49,000,000. Through FY 1995: $40,800,000. FY 1996 Requirement: $3,000,000.

(8) Recurring ADPE Requirements (Continuing): This grouped item includes general purpose microcomputers, graphics display terminals, interactive terminals, plotters, remote job entry devices, digital communications equipment supporting Corps ADPE. Also included are dedicated word processing centers, microcomputers used for such office functions as word processing, electronic mail, spread sheet applications, small data base applications, local area networks, and communications with main frame computers for storage and retrieval of management information. Recurring ADPE is utilized to improve the interfaces between separate computer configurations, to improve the communications transmission capability, and to replace ADPE that has reached the end of its useful life. Microcomputers are justified on a cost benefit basis to support both management and business, and scientific applications. The demand for quick access to accurate information at operational levels has generated requirements for ADPE in functional areas where it was previously absent or in functional areas where modern upgrade is required. All recurring ADPE requirements will be reviewed for consistency with the Corps of Engineers Information Systems Management Plan. FY 1996 Requirement:$5,000,000.

e. Tools, Office Furniture & Equipment:

(1) Systems Furniture - Los Angeles District (New). The Los Angeles District, currently housed in two buildings, is working with the General Services Administration (GSA) to obtain new office space which would allow the consolidation of all district

functions witin a single facility. Typically GSA designs new office space for systems furniture because systems furniture uses space more efficiently than conventional furniture. In addition, modular furniture yields savings by reducing the costs of reconfiguring office space to implement organizational changes. Furthermore conventional office furniture does not efficiently accommodate computers/telecommunications equipment. Acquisition of systems furniture to coincide with a move to a new facility saves costs associated with moving existing furniture and minimizes time lost during a move. The time which would be lost during a move of the District's existing furniture is valued at $350,000. The selected purchase option of modular system furniture requires 581 workstations, executive furniture for 20 managers and training/conference room furniture. Total estimated cost: $3,000,000. FY 1996: $3,000,000.

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APPROPRIATION TITLE: Oil Spill Research, FY 1996

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY 1996-2000) Program Cost	$4,325,000
Appropriation Requested for FY 1996	850,000
Balance to Complete Five-Year Program after FY 1996	3,475,000
Appropriation for FY 1995	900,000
Decrease of FY 1996 from FY 1995	50,000

JUSTIFICATION: Title VII of the Oil Pollution Act of 1990 authorizes use of the Oil Spill Liability Trust Fund to perform oil pollution research. Oil spills represent a major environmental hazard with potential long term consequences. When a spill occurs, remote sensing is the most appropriate tool to monitor and to confirm location because of the ability to repeatedly cover large areas and provide a geographical product for cleanup. Remote sensing techniques specifically for oil spill sensing in an area of limited access are not routinely available. Sensors and procedures to acquire, analyze and distribute results of analyzed data to decision makers and operations personnel is of critical concern to clean up operations evolving from man-made or natural disasters. An integrated approach needs to be developed that includes (1) data collection using airborne and satellite sensors, (2) analysis techniques that can rapidly store and analyze very high data rates, and (3) modeling and display techniques that can provide real time output for allocation of assets in clean up operations.

The initial focus of the Army Corps of Engineers research effort will be in the development of advanced data acquisition system, data management systems and display technologies utilizing satellite and/or aircraft imaging data for map generation. These management tools will be "near real-time", accurate, and focused for the on-scene spill coordinator's use for optimal allocation of resources and timely response to the specific oil spill situation.

MAJOR FEATURES OF THE FY 1996 PROGRAM: Sensors are available that are capable of measurement and monitoring of oil on land and in water regimes. These data from the airborne sensors and the media that they are stored on, are of critical importance since real-time oil spill information is required by the decision maker and provide oil condition information, on the land or water environment. The location requirement can be met using geopositioning systems. Once the sensor data has been acquired, software to rapidly analyze and display the oil distribution and concentration is required. These software systems need to be configured to analyze very large data sets, and to merge the

Oil Spill Research (Cont'd.)

analyzed data into a spatial data management system which can provide the required input to predictive or real time models. The procedures to distribute and display the oil distribution output can be accomplished using available systems. Satellite and aircraft sensors will be evaluated to determine the best sensor package to detect and delineate oil contaminated areas. Emphasis will be placed on water and coastal areas to develop a recommended sensing approach for emergency operations. Spectral characteristics of oil types will be determined to assist in the evaluation of digital data acquired from spills and to determine sensor capability over a broad range of conditions. Specific limits of each sensing method and the compatibility of the sensor outputs with conventional image processing and information management techniques will be defined. Major features also include testing and demonstration of oil dispersion models and GPS requirements for positioning accuracy and determination of GPS requirements for positioning accuracy and navigation aids.

ACCOMPLISHMENTS IN FY 1995:

1. Tested and demonstrated existing remote sensors for the delineation of oil using airborne system.

2. Built interface system for telementry of oil information for cleanup vessels.

3. Determined Corps of Engineers assets for oil cleanup operations.

PROGRAM TITLE: Support for Others, FY 1996

JUSTIFICATION

Support for Others (SFO), the manpower for which is separately resourced by the Office of Management and Budget, is reimbursable work performed by the Army Corps of Engineers and funded by various Federal agencies, states and political subdivisions of states, and other entities, under applicable Federal law. The program fills a void for many agencies which do not have adequate capability to manage the engineering needs of their missions or engineering or construction contracts with private firms. The reimbursable assistance the Army Corps of engineers provides is typically related to technical oversight and contract management.

In FY 1996, the Army Corps of Engineers estimates support will be provided to over 50 various Federal agencies. The estimated dollar value of our efforts and the resulting construction could total $700 million. The actual program size will depend on various factors: the requesting agency's appropriation which often is not known until the first quarter of the fiscal year, final agency decisions made on how these appropriated funds will be dispersed for projects, and the magnitude of natural emergencies.

MAJOR FEATURES OF THE FY 1996 PROGRAM:

A large reimbursable program is the work for the Environmental Protection Agency (EPA). The Corps supports EPA on its Superfund and Construction Grants program and also performs review and coordination of the planning, design, and construction of EPA facilities.

Another large reimbursable program is the Corps environmental restoration support to the Department of Energy (DOE).

Examples of work for other Federal agencies in FY 1996 include project management, design, review and construction management for the renovation of the General Accounting Office headquarters building; construction grant monitoring for the Department of Housing and Urban Development; design and construction of border facilities for the Immigration and Naturalization Service; and study, design, engineering, or construction assistance for various Department of Interior subagencies to include the National Park Service, the Fish and Wildlife Service, and the Bureau of Indian Affairs.

A potentially large but unpredictable program is that for the Federal Emergency Management Agency (FEMA). The largest component of FEMA support occurs during natural disasters where type and magnitude of support is unpredictable. The Corps also performs flood insurance studies and related technical work to support the Federal Emergency Insurance Program and hurricane evacuation studies and underground storage tank removal at Emergency Broadcast System sites throughout the United States.

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ACCOMPLISHMENTS IN FY 1995:

The Corps executed approximately $700 million in support of other agencies programs in FY 1995 which includes the following examples. Two hundred forty million dollars of work related to the EPA Superfund program and $160 million of environmental restoration work for other agencies, primarily, DOE was accomplished. Embassy renovations were completed for the State Department in Eastern Europe. A Corps employee was on-site providing construction management oversight at the site of the new Federal Bureau of Investigation in Clarksburg, WV. The Corps completed its Mt. Pinatubo Remedial Action Plan for the U.S. Agency for International Development.

TITLE: FY 1996 Disposition of Headquarters Centralized Accounts

1. **Headquarters Centralized Accounts.** The term, Headquarters Centralized Accounts, refers to those activities which were common to most or all Corps organizations, and more efficiently executed in one location. By negotiating a single master contract or performing the systems maintenance in a single location, costs could be reduced from the sum of those which each district and operating division individually could negotiate. Approximately seventy-five percent of the activities funded through the Corps-wide Centralized Accounts were management information systems used in Corps districts and operating divisions. The remaining Centralized Accounts supported management initiatives, benefitting most Corps organizations. The costs of Headquarters Centralized Accounts were usually billed to Civil and Military Programs based on the relative workload of each activity. For each account, the Corps' policy was to bill consistent with projected usage. Systems used exclusively by Civil Works or Military Programs were billed only to those programs; shared systems were billed proportionally to each.

In FY 1994, a House Appropriations Committee (HAC) Surveys and Investigations (S&I) Team reported deficiencies in the management of Centralized Accounts and the Chief of Engineers decided to abolish all those accounts at the beginning of FY 1996.

2. **Headquarters Centralized Accounts in FY 1996.** The FY 1995 budget justification data included a section detailing the Headquarters Centralized Accounts in order to provide full disclosure to the Congress; although no request for Budget Authority was involved. The FY 1995 justification sheets were prepared during an on-going Centralized Accounts review. Subsequent to the budget, some Centralized Accounts were eliminated or direct funded; while others were reduced. Also in FY 1994, Centralized Accounts' funding for some systems was split with development costs being funded by the Plant Replacement and Improvement Program (PRIP) and maintenance costs remaining in the Centralized Accounts. All Headquarters Centralized Accounts will have been eliminated, effective 1 October 1995. This FY 1996 justification section provides a final accounting for all FY 1995 reported centralized accounts and identifies the proposed funding source for any activity expected to continue in FY 1996. All FY 1995 Centralized Accounts, requesting direct funding in FY 1996 are identified as line items in the appropriate civil appropriation's budget justification sheets.

INITIATIVES	FY94 Approved	Original FY 95 Funding Level	Reduced FY 95 Funding Level *	FY 96 Funding Source Proposed	Proposed FY 96 Direct Civil Funds
SYSTEMS MAINTENANCE					
ACASS	520,000	520,000	520,000	Fee for Service - Add to CEAP charge	
APPMS	100,000	298,000	298,000	Fee for Service	
ARMS	500,000	250,000	250,000	Fee for Service	
BLAST	250,000	250,000	0	Removed in FY 95 - Funded from OMA	
CACES	1,200,000	1,200,000	1,200,000	Fee for Service	
CADD Center	892,000	892,000	892,000	Direct Funding - GE	650,000
CAGE	500,000	450,000	450,000	Direct Funding - GI	325,000
CASE	550,000	550,000	550,000	Direct Funding - GI	610,000
CCASS	147,000	147,000	147,000	Fee for Service - Add to CEAP charge	
CCB/SPECS INTACT	150,000	150,000	150,000	Direct Funding - GE	150,000
CEFMS **	135,000	712,500	712,500	Fee for Service - Add to CEAP charge	
COEMIS	2,265,000	2,188,650	1,800,000	Fee for Service - Add to CEAP charge	
DIM Data Integration Work	0	135,850	135,850	Direct Funding - GE	75,000
Dynex	50,000	50,000	50,000	Fee for Service - Add to CEAP charge	
Form 3086 System	140,000	100,000	0	Removed in FY 95 - Funded from OMA	
GCASE	125,000	125,000	125,000	Direct Funding - GI	125,000
Numerical Models	2,678,000	2,000,000	2,000,000	Direct Funding - GI	2,500,000
PCASE	300,000	300,000	150,000	Fee for Service & Direct Fund - GI	45,000
PROMIS **	100,000	1,187,500	0	Direct Funding - GE	No Funding Rq'd
RSSC/REMIS	950,000	950,000	800,000	Fee for Service & Direct Funding - GE	338,000
RMS ***	0	332,500	332,500	Direct Funding - GE	100,000
VIMS	50,000	196,000	196,000	Fee for Service	
SUBTOTAL	11,602,000	12,985,000	10,758,850		4,918,000
MANAGEMENT IMPROVEMENTS					
Alternative Dispute Resolution	200,000	200,000	200,000	Direct Funding - GE	120,000
CW Guidance Maintenance Prgm	0	750,000	0	Removed in FY 95 - Funded from GE	1,250,000
CW Guidance Update Prgm	1,707,000	0	500,000	Direct Funding - GE under item above	0
EDP for Engineers/Scientists	500,000	500,000		Direct Funding/Training - GE	300,000
Equipment Manual	200,000	200,000	200,000	Direct Funding - GE	300,000
Long Term Training	2,991,000	2,565,000		Direct Funding/Training - GE	1,700,000
SUBTOTAL	5,598,000	4,215,000	900,000		3,670,000
GRAND TOTAL	17,200,000	17,200,000	11,658,850		8,588,000

* FY96 funded Centralized Accts were civil & military, except CCB/SPECS INTACT; GCASE; CADD; Numerical Models which were just civil. CADD Centers have military funding but through a tri-service (Army, Navy, Air Force) arrangement.

** Also receive PRIP funding in FY 95 which is anticipated to continue in FY 96.

*** If RMS is permitted to continue, PRIP funding is also anticipated to be requested. 6 FEB 1995

3. **Centralized Accounts Acronyms.** This table provides the full name of the FY 1995 funded Centralized Accounts Systems appearing on the previous page.

ACASS	Architect-Engineer Contract Administration Support System
APPMS	Automated Personal Property Management System
ARMS	Automated Review Management System
BLAST	Building Loads Analysis & System Thermodynamics
CACES	Computer Aided Cost Engineering Support System
CADD Center	Computer Aided Design & Drafting Center
CAGE	Computer Aided Geotechnical Engineering
CASE	Computer Aided Structural Engineering
CCASS	Construction Contractor Appraisal Support System
CCB/SPECS INTACT	Construction Criteria Base/SPECS INTACT
CEFMS	Corps of Engineers Financial Management System
COEMIS	Corps of Engineers Management Information System
DIM Data Integration	Directorate of Information Management Data Integration Work
DYNEX	An electronic library management system
Form 3086 System	Military Construction Cost Estimate Form
GCASE	Geotechnical Aspects of Computer Aided Structural Engineering
Numerical Models	Tools for solving complex engineering problems & multiple planning scenarios
PCASE	Pavement-Transportation Computer Assisted Structural Engineering
PROMIS	Program & Project Management Information System

RSSC/REMIS	Real Estate Systems Support Center/Real Estate Management Information System
RMS	Resident Management System
VIMS	Vehicle Information Management System

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AUTOMATION COSTS

General: The Army Corps of Engineers utilizes automated information systems in all phases and aspects of its operations from the planning and design of Corps projects through their operation and maintenance; from the collection and analysis of hydrographic data to control flows in the nation's rivers to the management of fiscal and human resources; and from the search for legal precedents to the review of construction contractor performance histories. Expenditures for automated information systems include acquisition of commercial software packages and the design and development of applications to meet unique engineering requirements; the acquisition of personal computers for use on engineers' desks and of mainframes for processing centers used by thousands of employees; and the leasing of long distance lines for E-mail and high speed transfer of engineering and other data between Corps sites.

Projected FY 1996 automation costs are displayed under three main categories: acquisition of hardware and associated commercial off-the-shelf software (COTS), automated information systems (AIS), and personnel.

Hardware. Table A shows projected hardware and associated COTS acquisition costs for FY 1996. About one third of the costs for the acquisition of hardware which supports Civil Works programs are included in the Revolving Fund Plant Replacement and Improvement Program (PRIP) under one of several items of Fixed Land Plant: Corps of Engineers Automation Plan (CEAP), Water Control Data Systems, Computer Aided Drafting and Design (CADD), and Recurring ADPE Requirements. For FY 96 the Corps has programmed $12 million of Revolving Fund resources for these four items as shown in the Revolving Fund PRIP section of the Remaining Items justification sheets. In addition to the $3 million identified for additional capital acquisitions under CEAP, approximately $11.4 million will be required in FY 96 to operate and maintain the two data processing centers and for the communications network linking Corps sites with these centers.

The remaining Civil Works requirements for automation hardware are for items such as engineering work stations, file servers, personal computers, printers and other peripheral equipment costing less than $25,000 or items which will be utilized only in support of a single project, including research and development activities at Corps laboratories, and will be acquired with project funds. Such items are not eligible for Revolving Fund PRIP financing since they do not meet the threshold for capitalization, or do not support more than one project. The estimated FY 96 Civil Works requirement for engineering work stations, printers and other peripheral equipment to support technical, scientific and engineering staff is $11.6 million; for personal computers, printers and other peripheral equipment to support office automation and other general purpose office automation requirements is $10.7 million; for file servers, printers and other peripheral equipment which support data communications is $3.6 million; and for engineering work stations, file servers, personal computers, printers and other peripheral equipment to support automated information systems is $6.9 million. Funding for these items will be either through the General Expenses appropriation, district or laboratory overhead accounts, or specific Civil Works programs or projects.

Software: Table B shows estimated FY 96 Civil Works funding requirements to support automated information systems (AIS). These AIS have been grouped by whether they are in use Corps-wide or were developed to meet local requirements. Corps-wide AIS have also been grouped by their role in the design, construction, operation and maintenance of Corps projects, and management of the Civil Works program. Included among the AIS are the two systems in the Corps Information Systems Modernization Program (ISMP), the Corps of Engineers Financial Management System (CEFMS) and the Program and Project Management Information Systems (PROMIS), currently under development, which are included in the FY 96 Revolving Fund PRIP request. The difference between the FY 96 requirements for these systems reflected in Table B and the amounts shown in the Revolving Fund PRIP portion of the Remaining Items justifications are maintenance costs during deployment which should not be capitalized in the PRIP.

The AIS requirements include $2.2 million in Corps personnel costs which are also reflected in Table C.

Personnel. Table C is an estimate, by activity, of the direct labor costs for the professional Computer Specialists, Programmers, Systems Analysts, Programmer Analysts, and the Computer Technicians and Assistants which are charged to Civil Works projects and appropriations, based on actual direct labor costs in FY 1995. Not included are the costs of visual information specialists, photographers, print specialists, librarians, mail clerks, or the budget analysts and other support personnel who comprise a typical Corps information managment office.

TABLE A
HARDWARE ACQUISITION

Item	PRIP Funded	FY 1996 Civil Works Requirement
Corps of Engineers Automation Plan (CEAP)	X	3,000,000
Computer-Aided Design and Drafting (CADD)	X	3,000,000
Water Control Data Systems (WCDS)	X	1,000,000
Miscellaneous Automatic Data Processing Equipment (costing more than $25,000 and capitalized through the Plant Replacement and Improvement Program)		
Huntsville Division		350,000
Lower Mississippi Valley Division		25,000
Missouri River Division		525,000
North Atlantic Division		625,000
North Central Division		500,000
New England Division		100000
North Pacific Division		275,000
Ohio River Division		500,000
South Atlantic Division		375,000
South Pacific Division		275,000
Southwestern Division		325,000
Laboratories		525,000
Other Field Activities		500,000
Headquarters		100,000
Subtotal Miscellaneous ADPE	X	5,000,000
Engineering work stations, file servers, personal computers, and other peripheral equipment costing less than $25,000 and therefore not capitalized:		
--scientific, technical and engineering		11,600,000
--office automation and other general purpose		10,700,000
--data communications		3,600,000
--automated information systems support		6,900,000
Subtotal		32,800,000
Total		44,800,000

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TABLE B
AUTOMATED INFORMATION SYSTEMS

	STATUS	FY 1996 CIVIL WORKS REQUIREMENT
CORPS SYSTEMS		
Engineering		
Architect-Engineer Contract Admin Support System (ACASS)	Maintenance	$312,000
Automated Review Management System (ARMS)	Maintenance	$50,000
Computer-Aided Geotechnical Engineering (CAGE)	Maintenance	$325,000
Computer-Aided Structural Engineering (CASE)	Upgrade	$610,000
Computer-Aided Design and Drafting Support Center	Maintenance	$650,000
Geotechnical Aspects of Computer-Aided Struc Eng (GCASE)	Maintenance	$125,000
Microcomputer Cost Engineering Support Systems (MCACES)	Maintenance	$600,000
Pavement-Transportation Computer Assist Struc Eng (PCASE)	Maintenance	$45,000
Automated Coastal Engineering System (ACES)	Maintenance	$13,000
Construction		
Resident Management System (RMS)	Maintenance	$100,000
Construction Contractor Appraisal Support System (CCASS)	Maintenance	$90,000
Construction Criteria Base/Spec Intact (SPECSINTACT)	Maintenance	$150,000
Operations and maintenance		
Dredging Information System	Maintenance	$50,000
Lock Performance Monitoring System (LPMS)	Maintenance	$100,000
Port & Waterways System (PWS)	Upgrade	$50,000
Waterborne Commerce Statistics	Maintenance	$100,000
Prioritizing O&M Maintenance Projects (QUADRANT)	Maintenance	$20,000
Water Demand Forcasting Model	Maintenance	$60,000
Automated User Permit System (AUPS)	Maintenance	$10,000
GET Application System	Maintenance	$10,000
Natural Resource Management System (NRMS)	Maintenance	$10,000
Visitor Estimating and Reporting System (VERS)	Maintenance	$5,000
Water Control Data System (WCDS)	Upgrade	$66,000

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TABLE B
AUTOMATED INFORMATION SYSTEMS

	STATUS	FY 1996 CIVIL WORKS REQUIREMENT
Standard Maintenance Management System (SAMMS)	New	$500,000
Operation and Maintenance Business Information Link (OMBIL)	New	$2,225,000
Real Time Water Control	Upgrade	$1,000,000
Regulatory		
Regulatory Analysis Management System (RAMS)	Maintenance	$128,000
Project/program management		
Project and Program Management Information Sys (PROMIS)	Replacement	$1,258,000
Real Estate Management Information System (REMIS)	Maintenance	$606,000
Project and Resource Information Sys for Managers (PRISM)	Maintenance	$492,000
Life Cycle Project Management Reporting System (LRS)	Maintenance	$60,000
Civil Work O&M Automated Budget System (CWOMABS)	Maintenance	$300,000
Force Configuration (FORCON)	Maintenance	$300,000
Finance and Accounting		
Corps of Engineers Financial Management System (CEFMS)	Replacement	$7,582,000
Corps of Engineers Management Info System (COEMIS)	Maintenance	$1,213,800
Corps of Engineers Time, Attendance and Leave Sys (CETAL)	Maintenance	$132,000
Corps Operating Budget Resource Analysis (COBRA)	Maintenance	$57,000
Payroll	Msintenance	$190,800
Other		
Automated Personal Property Management System (APPMS)	Maintenance	$99,000
Vehicle Information Management System (VIMS)	Maintenance	$51,000
Corps of Engineers Electronic Mail System (CORPSMAIL)	Maintenance	$37,200
Corps of Engineers Automated Legal System (CEALS)	Maintenance	$800,400
Corps Library (CORPS)	Maintenance	$115,200
Corps of Engineers Library Information System (COELIS)	Maintenance	$50,000

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TABLE B
AUTOMATED INFORMATION SYSTEMS

	STATUS	FY 1996 CIVIL WORKS REQUIREMENT
Employee Database (EDB)	Maintenance	$600
Engineer and Scientist Career Program	Maintenance	$36,000
Laboratory Information Management System (LIMS)	Replacement	$18,000
Data Encyclopedia	Maintenance	$360,000
Safety Information Management System (SIMS)	Maintenance	$5,000
Initiative Tracking System (ITS)	Maintenance	$10,000
Office Automation Support Integrated System (OASIS)	Maintenance	$54,000
Corps Bulletin Board (CORPSBB)	Maintenance	$33,000
STANDARD ARMY SYSTEMS		
Standard Army Automated Contracting System (SAACONS)		$65,000
CORPS LOCAL SYSTEMS		
Lower Mississippi Valley Division		
Computer-Aided Supply Transaction Environment (Division-wide)	Maintenance	$2,000
Illinios Automated Data Acquisition System (St. Louis)	Maintenance	$10,000
Boring Log Microcomputer System (New Orleans)	Maintenance	$4,000
Cannon Dam Performance Monitor (St. Louis)	Maintenance	$7,000
Price Dam Performance Monitor (St. Louis)	Maintenance	$10,000
Wapappelo Dam Performance Monitor (St. Louis)	Maintenance	$15,000
Local CADD Support (St. Louis)	Maintenance	$168,000
Automated Incident Reporting System (St. Louis)	Maintenance	$20,000
Engineer Design Project Management System (St Louis)	Maintenance	$25,000
Relief Well Design System (Division-wide)	Maintenance	$2,000
Computer Environ Res Data System (Division-wide)	Maintenance	$12,500
Facility Resources Income Data (New Orleans)	Maintenance	$3,900
Local GIS (New Orleans)	Maintenance	$72,000
Warehouse Inventory Control System (Vicksburg)	Maintenance	$3,000
Lower MS River Survey (Division-wide)	Maintenance	$1,000

TABLE B
AUTOMATED INFORMATION SYSTEMS

	STATUS	FY 1996 CIVIL WORKS REQUIREMENT
Local CADD Support (New Orleans)	Maintenance	$168,000
Missouri River Division		
Construction Management System (Omaha)	Maintenance	$8,200
Finance and Accounting--Local Programs (Division-wide)	Maintenance	$6,200
Power Plant Control System (Division-wide)	Maintenance	$150,000
Power Plant Control System (Division-wide)	Replacement	$3,100,000
Project Maintenance Management System (Division-wide)	Maintenance	$45,000
Text Searchable Document System (Division-wide)	Maintenance	$500,000
HP Maintenance Mgmt Sys for Turner/Stockton (Division-wide)	Maintenance	$4,000
Local CADD Support (Kansas City)	Maintenance	$13,400
Local CADD Support (MRD)	Maintenance	$27,400
Local GIS (Division Office)	Maintenance	$2,400
Local GIS (Kansas City)	Maintenance	$2,400
Cannon-Truman-Stockton SCADA System (Kansas City)	Maintenance	$60,000
Local GIS (MRO)	Maintenance	$95,300
Lab Info Mgmt System (Division-wide)	Maintenance	$10,800
Missouri River Automated Data System (Division-wide)	Maintenance	$75,000
Regulatory Analysis Management System (Omaha District)	Maintenance	$33,000
North Atlantic Division		
Project Resource Operating System (Baltimore)	Maintenance	$2,200
North Central Division		
Open Plan (North Central Division)	Maintenance	$149,000
Applied Programs Systems (Division-wide)	Maintenance	$10,000
Local CADD Support (Division-wide)	Maintenance	$560,000
Fountain City Database Managment System (St. Paul)	Maintenance	$5,000
Water Control Data System (Rock Island)	Maintenance	$50,000
Operations Maintenance of Navigation Installations (Rock Island)	Maintenance	$65,000

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TABLE B
AUTOMATED INFORMATION SYSTEMS

	STATUS	FY 1996 CIVIL WORKS REQUIREMENT
North Pacific Division		
Alaska District Management System (Alaska)	Maintenance	$1,800
Budget Management Systems (Portland)	Maintenance	$46,000
Columbia River Water Temperature Model (Division-wide)	Maintenance	$10,000
Dredge Analysis Information System (Division-wide)	Maintenance	$4,000
Gas Spill (Division-wide)	Maintenance	$5,000
CADD Database Development (Portland)	Maintenance	$10,000
Fishpass (Division-wide)	Maintenance	$5,000
Auto Regulation Prog for SSARR (Division Office)	Maintenance	$1,000
Construction Information Management System (Seattle)	Maintenance	$4,000
Columbia River Operational Hydronet Management Sys (Division Office)	Maintenance	$25,000
Dredged Analysis Information System (Seattle)	Maintenance	$40,000
Power-Duration Pilot Program (Division-wide)	Maintenance	$5,000
F&A Data Entry System (Division-wide)	Maintenance	$27,500
Warehouse Inventory System (Portland)	Maintenance	$5,000
Streamflow Synthesis and Reservoir Regulation (NPD)	Maintenance	$30,000
Records Managment Information System (Seattle)	Maintenance	$9,500
Regulatory Imaging Database (Alaska)	Maintenance	$7,000
IM Audiovisual Tracking System (Portland)	Maintenance	$5,000
Preventive Maintenance System (Portland)	Maintenance	$1,000
Hydrographic System Seasonal Regulation (Division-wide)	Maintenance	$10,000
Permits Tracking Database (Portland)	Maintenance	$300
Corporate Data Management System (Seattle)	Maintenance	$21,600
SF-52 Tracking System (Seattle)	Maintenance	$2,300
Automated Manpower Utilization Reporting System (Division-wide)	Maintenance	$13,800
Ohio River Division		
Microstation Utility Programs (Pittsburgh)	Maintenance	$500
Permits Tracking Database	Maintenance	$300

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TABLE B
AUTOMATED INFORMATION SYSTEMS

	STATUS	FY 1996 CIVIL WORKS REQUIREMENT
FTE Workyear Reporting System (Pittsburgh)	Maintenance	$500
Hydrographic Survey System (Pittsburgh)	Maintenance	$500
Geotech Instrumentation Sys (Pittsburgh)	Maintenance	$5,000
Lab Info Mgmt System (ORD)	Maintenance	$700
Navigation Predictive Analysis (Louisville)	Maintenance	$5,000
Preventive Maintenance System (Pittsburgh)	Maintenance	$29,200
Reservoir Profile Graphs (Pittsburgh)	Maintenance	$300
South Atlantic Division		
Customer Assistance Center System (Division Office)	Maintenance	$2,500
Career Management Program (Division-wide)	Maintenance	$400
Local CADD Support (Savannah)	Maintenance	$60,000
Executive Information System (Jacksonville)	Maintenance	$1,000
Executive Information System (Division Office)	Maintenance	$10,000
Work Request Tracking System (Jacksonville)	Maintenance	$1,000
Teach, Coach and Assist (Division-wide)	Maintenance	$800
INCOME (Mobile)	Maintenance	$2,000
Project Related Data Systems (Savannah)	Maintenance	$10,000
Life Cycle Project Management (Jacksonville)	Maintenance	$12,000
South Pacific Division		
Electronic Orange Book (SPL)	Maintenance	$15,000
Project Execution and Tracking System (South Pacific Division)	Maintenance	$32,000
Plan Room Automation (Sacramento)	Maintenance	$400
Non-Structural Evaluation (Sacramento)	Maintenance	$200
S&A Report (Los Angeles)	Maintenance	$1,500
Telemetry Collection (Los Angeles)	Maintenance	$15,000
Operation Budget Execution System (Los Angeles)	Maintenance	$1,600
Auto Telephone Staffing System (Los Angeles)	Maintenance	$7,500
TELEM Reporting Software (Los Angeles)	Maintenance	$5,000

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TABLE B
AUTOMATED INFORMATION SYSTEMS

	STATUS	FY 1996 CIVIL WORKS REQUIREMENT
Reservoir Calculation Program (Los Angeles)	Maintenance	$5,000
Emergency Management Information System (Sacramento)	Maintenance	$1,300
Southwestern Division		
Albuquerque Dist Mgmt Info System (Albuquerque)	Maintenance	$3,800
Laboratories		
Municipal and Industrial Needs System (Inst for Water Resources)	Maintenance	$60,000
Proposal Tracking System (Construction Eng Research Lab)	Maintenance	$800
Vendor Information System (Waterways Experiment Station)	Maintenance	$21,800
Laboratory Management Info System (Waterways Experiment Station)	Maintenance	$3,900
TOTAL		$27,394,000

TABLE C
AUTOMATION PERSONNEL COSTS

ACTIVITY	CIVIL WORKS AUTOMATION PERSONNEL COSTS
HUNTSVILLE DIVISION	$51,000
LOWER MISSISSIPPI VALLEY DIVISION	
MEMPNIS DISTRICT	$113,000
NEW ORLEANS DISTRICT	$526,000
VICKSBURG DISTRICT	$234,000
DIVISION OFFICE	$116,000
DIVISION TOTAL	$990,000
MISSOURI RIVER DIVISION	
KANSAS CITY DISTRICT	$580,000
OMAHA DISTRICT	$386,000
DIVISION OFFICE	$168,000
DIVISION TOTAL	$1,134,000
NEW ENGLAND DIVISION	$349,000
NORTN ATLANTIC DIVISION	
BALTIMORE DISTRICT	$520,000
NEW YORK DISTRICT	$136,000
NORFOLK DISTRICT	$386,000
PHILADELPHIA DISTRICT	$181,000
DIVISION OFFICE	$28,000
DIVISION TOTAL	$1,250,000
NORTH CENTRAL DIVISION	
BUFFALO DISTRICT	$281,000
CHICAGO DISTRICT	$62,000
DETROIT DISTRICT	$151,000
ROCK ISLAND DISTRICT	$400,000
ST PAUL DISTRICT	$428,000
DIVISION OFFICE	$298,000
DIVISION TOTAL	$1,620,000
NORTN PACIFIC DIVISIOH	
ALASKA DISTRICT	$35,000
PORTLAND DISTRICT	$131,000
SEATTLE DISTRICT	$226,000
WALLA WALLA DISTRICT	$370,000
DIVISION OFFICE (Includes Western Regional Processing Center operationas.)	$1,560,000
DIVISION TOTAL	$2,322,000

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TABLE C
AUTOMATION PERSONNEL COSTS

ACTIVITY	CIVIL WORKS AUTOMATION PERSONNEL COSTS
OHIO RIVER DIVISION	
HUNTINGTON DISTRICT	$258,000
LOUISVILLE DISTRICT	$470,000
NASHVILLE DISTRICT	$169,000
PITTSBURGH DISTRICT	$351,000
DIVISION OFFICE	$38,000
DIVISION TOTAL	$1,286,000
SOUTH ATLANTIC DIVISION	
CHARLESTON DISTRICT	$133,000
JACKSONVILLE DISTRICT	$351,000
MOBILE DISTRICT	$531,000
SAVANNAH DISTRICT	$57,000
WILMINGTON DISTRICT	$218,000
DIVISION OFFICE	$144,000
DIVISION TOTAL	$1,434,000
SOUTH PACIFIC DIVISION	
LOS ANGELES DISTRICT	$648,000
SACRAMENTO DISTRICT	$646,000
SAN FRANCISCO DISTRICT	$170,000
DIVISION OFFICE	$392,000
DIVISION TOTAL	$1,857,000
SOUTHWESTERN DIVISION	
ALBUQUERQUE DISTRICT	$174,000
FORT WORTH DISTRICT	$320,000
GALVESTON DISTRICT	$234,000
LITTLE ROCK DISTRICT	$369,000
TULSA DISTRICT	$350,000
DIVISION OFFICE	$264,000
DIVISION TOTAL	$1,750,000
LABORATORIES	
COLD REGIONS RESEARCH ENGINEERING LABORATORY	$42,000
CONSTRUCTION ENGINEERING RESEARCH CENTER	$115,000
WATERWAYS EXPERIMENT STATION (Includes Central Regional Processing Center operations.)	$1,075,000
TOTAL	$1,232,000
HEADQUARTERS	$2,681,000
GRAND TOTAL	$17,956,000

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Justification of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

Summary of Budget Request for Inland Waterways Trust Fund Projects

Project Name	Construction, General Appropriation $	Inland Waterways Trust Fund $	Total $
Construction			
GIWW, Sargent Beach, TX	10,000,000	10,000,000	20,000,000
Locks & Dams 2, 3 & 4, Monoghela River, PA	3,096,000	11,904,000	15,000,000
Olmsted Locks and Dam, IL & KY	16,050,000	16,050,000	32,100,000
Robert C. Byrd Locks and Dam, WV & OH	5,000,000	5,000,000	10,000,000
(Locks)	2,877,000	2,877,000	5,754,000
(Dam Rehabilitation)	2,123,000	2,123,000	4,246,000
Winfield Locks and Dam, WV	5,920,000	5,920,000	11,840,000
Total - Construction	40,066,000	48,874,000	88,940,000

6 FEB 1995

Justification of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

Summary of Budget Request for Inland Waterways Trust Fund Projects

Project Name	Construction, General Appropriation $	Inland Waterways Trust Fund $	Total $
Rehabilitation			
Four Locks, Illinois Waterway, IL (Rehab)	1,627,000	1,627,000	3,254,000
Lock and Dam 14, Mississippi River, IA (Rehab)	350,000	350,000	700,000
Lock and Dam 24, Mississippi River, IL & MO (Rehab)	1,000,000	1,000,000	2,000,000
Lock and Dam 25, Mississippi River, IL & MO (Rehab)	2,150,000	2,150,000	4,300,000
Total - Rehabilitation	5,127,000	5,127,000	10,254,000
Gross Total - Construction and Rehabilitation	45,193,000	54,001,000	99,194,000
Reduction for Anticipated Savings and Slippage	(5,022,000)	(6,001,000)	(11,023,000)
Net Total	40,171,000	48,000,000	88,171,000

6 FEB 1995

Justification of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 1996

SUMMARY OF ALL APPROPRIATIONS

APPROPRIATION TITLE	FY 1995 Appropriation 1/	FY 1996 Request	Increase (Decrease)
	$	$	$
General Investigations	181,199,000	155,625,000	(25,574,000)
Construction, General	983,668,000 2/	785,125,000 3/	(198,543,000)
Operation and Maintenance, General	1,646,535,000 4/	1,749,875,000 5/	103,340,000
Flood Control, Mississippi River and Tributaries	328,138,000	319,250,000	(8,888,000)
Regulatory Program	101,000,000	112,000,000	11,000,000
Flood Control and Coastal Emergencies	14,979,000	20,000,000	5,021,000
General Expenses	152,500,000	164,725,000	12,225,000
Oil Spill Research	900,000	850,000	(50,000)
Revolving Fund	0	0	0
Permanent Appropriations (Estimated)	11,979,000	11,296,000	(683,000)
	==============	==============	==============
Total	3,420,898,000	3,318,746,000	(102,152,000)

1/ Energy and Water Development Appropriations Act, 1995, P.L. 103-316 (108 Stat. 1707)
2/ Includes an estimated $71,037,000 to be derived from the Inland Waterways Trust Fund in FY 95
3/ Includes an estimated $48,000,000 to be derived from the Inland Waterways Trust Fund in FY 96. Excludes $250,000,000 in unobligated carryover from prior years that is being programmed for use in FY 95, of which $50,250,000 is derived from the Inland Waterways Trust Fund.
4/ Includes an estimated $462,000,000 to be derived from the Harbor Maintenance Trust Fund in FY 95 and $39,000,000 from Special Recreation Use Fees.
5/ Includes an estimated $500,000,000 to be derived from the Harbor Maintenance Trust Fund in FY 96 and $30,000,000 from Special Recreation Use Fees.

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Mr. MYERS. Well, thank you for your presentation, General.

RESCISSIONS

You attended, of course, all the hearings that we have had so far with the divisions and there was one recurring theme throughout—except with one exception—the performance by divisions unable to spend the money we appropriated last year, sometimes large amounts. One division was 90 percent. And there were several reasons given. Some overestimation, being over optimistic.

Because of that, we did, which I am sure you are aware of, take the rescissions that this committee considered a week ago and will be considered by the full committee later this week and possibly on the Floor next week. Of that, we took $10 million from Investigations and Preconstruction and $40 million, as I recall, was taken from Construction. What impact will that have on the completion this year of those two areas, the $10 and $40 million? And into the next year, also?

General GENEGA. I think they will have no significant impact this year. That is, given the amount of money that we expected to carry over that you referenced in your lead in. I would say that it would have no significant impact on any of the schedules that we are executing this year.

Mr. MYERS. We could have taken more, but you were carrying over some of that into your plans for the 1996 fiscal year so we took that into consideration. I hope we don't have to dip into that any more this year. It isn't painless, as we all know. Are there any specific programs that will have to be slowed down or cut back because of those two recisions that we took?

General GENEGA. No, sir, I don't believe so. We may have to do some reprogramming depending on how that package finally comes out, but we are comfortable that we can continue the efforts that we now have scheduled.

CEFMS

Mr. MYERS. As you recall, last year we had several sessions just on one issue, CEFMS, when it came up. This committee, and Mr. Gallo took the lead on some of this—and we were concerned about how successful, how effective CEFMS would be. What can you tell us about CEFMS now?

General GENEGA. I share some of your concern about CEFMS. It has gotten very intensive management over the course of the last year. We are still experiencing difficulties with CEFMS. We all wish in hindsight that perhaps we didn't have as many problems with CEFMS as we do have.

It is in the beta testing mode, the so-called beta testing mode, and the intention during beta testing is to put the system actually in the hands of users and to make sure it works as opposed to it working theoretically, if you will. It is expected that during that beta testing that we will uncover some bugs, some problems as we are going.

I will tell you that in my professional judgment, sir, that the Corps needs an automated financial management system, given the world in which we live and all the things that we have to account for. And secondly, that CEFMS is the closest thing we have to providing that at the moment.

I have been concerned with comments that perhaps we ought to stop working on CEFMS. My professional judgment on that would be that that would be throwing the baby out with the bath water. We have some things that we have got to fix. In hindsight, we wish we didn't have as many, but I think we are on the right track, and we are going to provide the kind of automated financial system which will be responsive to, first of all, good management and then requirements like the Chief Financial Officer's Act.

Mr. MYERS. You say you are in a beta test mode? How long will that test mode last?

General GENEGA. It goes into 1996, the middle of 1996 is what the present plan is. We first fielded it to Huntsville Division, which does primarily military support work. Secondly, we fielded it to WES, Waterways Experiment Station, which of course does some civil work and military work.

Mr. MYERS. A lot of work for others.

General GENEGA. Yes, sir, they do some support for others, but on the civil side, they are principally on a reimbursable basis. Now we want to implement Southwestern Division, which is the first full-fledged test because Southwestern Division does everything the Army Corps of Engineers does.

One of the things that we are having trouble with is the Hydropower Accounting System. That is the first time that that has been tested because Huntsville and Waterways Experiment Station have nothing to do with that. While it appears that we are still having some problems, in fact that is with new accounting modules, if you will, that have not yet been field tested.

Mr. MYERS. So it hasn't been fully implemented throughout the Corps?

General GENEGA. No, sir, it goes into late 1997 to be fully fielded throughout the Corps.

Mr. MYERS. What we are hearing, from I guess Huntsville and some of the others, is that it just isn't working. That you are having to add additional people because of this to carry out the system and to make it work. Is that accurate that this is taking more people instead of less right now to administer the program?

General GENEGA. In the short term, yes, that is correct. We had someone speak to the commander down there this morning. He has eight people brought on board to do the data entry; the data entry is more difficult than we would have liked. There is a training issue with our people that perhaps we have to revise our training. The level of skill or knowledge required is a little higher than what we would have thought.

I would contrast that with Huntsville where that is not the case. They have worked past the data entry problem and it is learning problems on the part of the staff. It is still true at WES. We would hope to minimize it in the Southwestern Division, but again we think it is a function of the newness of the system, uncovering the problems and the bugs with it and then the learning curve for all the people who now have to make data entry.

Mr. MYERS. So it is your judgment, all of you—your supporting cast here, too—that the system will work, it is just a shake-out cruise right now?

General GENEGA. Yes, sir, and the weather is a little rougher than we would have liked it to have been in hindsight, but we think we are going to get through the weather.

Mr. MYERS. Okay. Mr. Bevill?

Mr. BEVILL. Thank you, Mr. Chairman. General Genega, you certainly, in my own opinion, you certainly do a very outstanding and dedicated job, and we appreciate you and the work that you do.

General GENEGA. Thank you, sir.

Mr. BEVILL. You mentioned Huntsville, Alabama. You know about the brain work going on there. Some people underestimated Huntsville. That is where the Saturn 5 was built that put the man on the moon. So don't underestimate those people.

General GENEGA. No, sir, they are great people. They have worked past the bugs.

CONFLICTING NUMBERS

Mr. BEVILL. I had to get in that punch line. I noticed that you asked for $548 million and your detailed statement shows that the total for the remaining items in the budget is $450,700,000. What is correct? The $548 million that you put on the screen?

General GENEGA. No, sir, the latter number is correct. We had spoken to your staff about having done some poor math and poor slide preparation and I think we just realized it this morning. We spoke to your committee staff. And I just have to say whoops and say I am sorry.

Mr. BEVILL. Well, they are pretty good. I just noticed that. They didn't tell on you.

NEW POLICIES

When the committee received word about the new criteria for the flood control projects, we were all deeply concerned with the shift of the cost to the local sponsor, and still are. You heard the question posed by the Members frequently here. I would like to get your opinion of what the impact of this is going to be, requiring 75 percent in lieu of 25 percent that we have had on flood control projects.

General GENEGA. Well, sir, I think the impact will be very dramatic as the previous testifiers have indicated in the course of the three criteria, of which cost sharing is the last one, all three criteria will have an impact. And of course, if all three are not met, then the project would not go forward.

But certainly there are probably cases where the first two criteria would be met. That is, 51 percent of the water is coming from out of State; and secondly, a 2-to-1 benefit cost ratio; and, the third one could well be daunting for an individual community that was unable to afford that money. But overall, there is no question that we will do significantly less flood control planning, engineering, and construction than what we do now.

Mr. BEVILL. Has that historically been one of the primary functions of the Corps of Engineers, protecting property and lives with flood control projects?

General GENEGA. Yes, sir, since the turn of the century.

Mr. BEVILL. And aren't you concerned about the impact?

General GENEGA. Well, sir, I am concerned. It is a significant impact across the Corps, both in what we do traditionally and mission-wise. I will say that my background is engineering and, quite frankly, as an engineer, every time something like that changes what we do the impact concerns me. Quite frankly I like to build things and like to solve problems and that is the bent of many of us. When that happens, we are concerned about it. At the same time, we understand the need to—or the desire, if you will, to balance the budget, but certainly a need to significantly reduce budgetary outlays.

CONTINUING AUTHORITIES

Mr. BEVILL. I understand—if I understand your statement correctly, you are proposing to terminate all the continuing authorities programs; is that correct?

General GENEGA. Yes, sir, that would be any that were not in construction during Fiscal Year 1996 would not be completed. Those that were under construction in Fiscal Year 1996, we would complete. So I would expect when we testify here on the Fiscal Year 1997 budget I would be asking for construction general funds to complete those projects that we had started this year or in fiscal year 1996.

Mr. BEVILL. All right. Will any new projects, studies and construction projects, be initiated in the fiscal year 1996?

General GENEGA. Sir, it is doubtful. The one place where I have significantly streamlined the procedures is under Section 14, the Emergency Stream and Bank Erosion, Gadsden, Alabama, for example. While we have significantly shortened that process, I have gotten at the statutory limit and I expect to stay in the statutory limit in 1996 based on those that I have under study right now principally because of the statutory limit.

I doubt that I would start something totally new in fiscal year 1996 and take it all the way to construction just because I will have carryover from ones that I have under study right now and have had to put on hold because of being at the statutory cap.

Mr. BEVILL. Is that the Coosa River or the Wills Creek?

General GENEGA. Sir, I am not familiar with either of those. If I may, for the record—I am not familiar with either of the names.

[The information follows:]

COOSA RIVER GEORGIA AND WILLS CREEK, ALABAMA

COOSA RIVER, GEORGIA The Oostanaula and Coosa Rivers originate in Floyd County in northwest Georgia and flow southwesterly into Weiss Lake in northeast Alabama. The current river depths are insufficient to support the commercial fishing activities conducted in the rivers. A reconnaissance report under Section 107 of the Continuing Authority Program as initiated in September 1994. The reconnaissance report would determine the need for further investigation for channel improvements and possible improvements to Mayo's Bar Dam to facilitate navigation for the fishing vessels. A study site visit was conducted in October 1994. The reconnaissance report should be completed by the end of July 1995. Subject to the findings in the reconnaissance report, follow-on feasibility studies would require about 24 months, and design would require another 12 months.

WILLS CREEK, ALABAMA Big Wills Creek and Little Wills Creek are located in Etowah County in northeast Alabama. The area is subject to flooding along the creeks from heavy rains and storms. The problem involves overbank flooding due to insufficient stream capacities. Studies were conducted under Section 205 of the Continuing Authority Program in 1980 and in 1990. Alternative solutions evaluated included channel clearing and widening. All alternative solutions lacked sufficient justification to warrant further study past the reconnaissance stage. Information gathered for the studies was provided to the interested communities. No studies are currently underway.

SECTION 1135 PROGRAM

Mr. BEVILL. Mr. Chairman, I believe that is all I have.

Mr. MYERS. Thank you, Tom.

General the Continuing Authority that Chairman Bevill—the committee has two chairmen now. You cannot be here 18 years and not still be the chairman. But some of the sections, as an example, in section 205 programs and section 14, you are going to terminate.

General GENEGA. Yes, sir.

Mr. MYERS. But yet you are going to ask for more money for section 1135 dealing with—section 204 programs, too, under the environment.

General GENEGA. Yes, sir.

Mr. MYERS. Aren't we saying environment is more important for the future of our country than saving people's lives and saving their property? It seems like the priorities here—is that part of this new concept that the administration has come up with? Is that part of that theory?

General GENEGA. Sir, I think it does reflect the administration's policy. The basis for that policy is that those things that were more properly—in the judgment of the administration—done by local and/or State governments ought to be done by them. That is the decision relative to flood control.

On the other hand, with regard to 1135 projects, the tie there is to Corps projects and the feeling was that the Federal Government, if you will, caused the problem that we are now trying to fix, therefore the Federal Government ought to have some obligation to fix those problems.

Mr. MYERS. Section 404 is an example. At the State level, who would carry out the responsibility of permitting at State level?

General GENEGA. At State level, sir?

Mr. MYERS. Who is going to do that work? We don't disagree the work has to be done, do we?

General GENEGA. No, sir. I think most of us would agree that the wetlands, at least to some degree, require some protection.

Mr. MYERS. Well, won't it take additional legislation to do that, to transfer responsibility back for section 404 and terminate the other responsibilities that we have had?

General GENEGA. Section 404, the Clean Water Act, does allow States to assume jurisdiction for a good portion of the regulatory program. What it does not allow is States to have the interstate water responsibilities, if you will. And those are, I think, more appropriately Federal Government and that reflects the judgment of the Congress in the Clean Water Act. Michigan and New Jersey administer the 404 program. We, the Army Corps of Engineers, don't grant permits with regard to wetlands for good portions of Michigan and New Jersey. Maryland is working on that right now.

In order to affect it with all the other States, we, of course, would have to have kind of a full court press with the EPA and those States to make that happen.

Mr. MYERS. What will happen if the State doesn't choose to accept the responsibility that you are passing on to them?

General GENEGA. Well, sir I expect that we would have to continue to exercise it.

Mr. MYERS. EPA has somewhat the same kind of relationship with some States. States, I understand, can adopt their own environmental policy, but if they don't do it, then EPA has to continue to do it and OSHA is the same way. You don't think it will take additional solutions in the judgment of the Corps?

General GENEGA. No, sir, we believe that for the 404 the legislation exists because the Clean Water Act, as it stands, has allowed Michigan and New Jersey to assume that, and Maryland is working at the moment, so we think that piece does exist.

Mr. MYERS. How long has it been working for New Jersey and Michigan?

General GENEGA. Sir, I don't know about Michigan and New Jersey, but I know that Maryland is in its fourth year now. For the record, I could give you the other States, but they are in their fourth year of working proposals with the EPA to make that happen.

Mr. MYERS. Presuming that it works in those two States?

General GENEGA. Yes, sir, I believe it does in both States.

[The information follows:]

STATE ASSUMPTION OF 404 PROGRAM

Michigan assumed the program in 1984; New Jersey in 1994.

Maryland has not assumed the program but is in its fourth year of using a Corps-issued State Program General Permit (SPGP). The SPGP gives the State more permitting authority and is a stepping stone to State assumption.

NATIONAL DREDGING STUDY

Mr. MYERS. What can you tell us about the National Dredging Study?

General GENEGA. Sir, there is a National Dredging Study ongoing which takes a gross and aggregate look at our dredging needs across the whole country. Also, to aggregate that by regions looking at depth of ports and at trends in shipping to try to give us at least a gross handle on the short-term future as to what it will take to maintain our Nation's ports and waterways.

Mr. MYERS. Has there been any problem in the last three or four years being able to handle the dredging responsibility of the harbors and the rivers? We don't hear from them anymore, get complaints like we used to have.

General GENEGA. The principal problem, sir, has to do with contaminated sediments. The good news is that 95 percent of the dredging that we do is very good material.

The 5 percent of the material is contaminated and it usually is that material which is found in areas that have been highly industrialized. For example, New York-New Jersey Harbor gives us a large percentage of contaminated sediment. We have had difficulty, and in fact, that is in part why we are looking for some of the research and development, the new program that we asked for this year, we are trying to simplify the testing.

For example, in one terminal area up in New York, it just took $150,000 to do the testing to determine if we had a problem. We are trying to look at other means of testing where we could lower those costs and shorten the period of time it takes to test, but I would say the principal problem has been with handling that material which is contaminated.

A secondary problem is, frankly, as some areas have built up and disposal areas have become filled, real estate costs are very high in the built-up areas and so in some cases we are working with local sponsors and having some difficulty identifying a cost-effective placement area for that material.

Mr. MYERS. You mean up in New York you are out looking for trouble? You don't have enough without having to go solicit?

General GENEGA. No, sir, we have enough up there.

Mr. MYERS. I am correct in assuming that this dredge study is about finding places for dredging material?

General GENEGA. Not so much finding specific places, sir, but looking at process; how we handle it and hopefully doing that in a safe fashion, so that we are able to apply it in places like New York and New Jersey. I mentioned that 5 percent of the material is contaminated. More than 5 percent in the New York-New Jersey Harbor is contaminated. It is 5 percent across the whole country. It is higher given the industrialization that occurred up there. It is significantly higher up there.

WATER SUPPLY AND AVAILABILITY

Mr. MYERS. It is prima facie when you talk about New York Harbor being contaminated. The national assessment of water supply and availability study that you are requesting some money, I think one-half million dollars that you have requested for reprogramming, we are looking at that right now trying to figure out what you are asking for. Didn't the Water Resources Development Act of 1986 say that water supply and demand is a 100 percent local responsibility?

General GENEGA. Yes, sir, and generally speaking the administration has always just as successive administrations have taken the position that it is a local responsibility with regard to various projects that have been proposed.

The thought here is that a national look has not been taken since 1975 when the then-existing Water Resource Council did that nationwide study and attempted, at least in gross amounts, to quantify where there were problems with water shortages and where there was an abundance of water.

The feeling is that we have gone 20 years without that being updated and the population has changed in some cases. There has been population shifts in the country, and that it would be prudent and useful to State, local, and Federal authorities to have that kind of aggregate gross information updated.

Mr. MYERS. Well, I think we could issue without having any legal problems, we could take care of the reprogramming, but next year when you come in, what will be the authority that we have to appropriate the money for this purpose?

General GENEGA. I think it would be appropriated under the special studies which is our generic authority, if you will, to do studies of nationwide interest. We have that authority to do studies that are in the interest of the work that we do. And your appropriation would then complete our ability to do that.

Mr. MYERS. I had the State of Indiana tell me—ask me the other day, do we need that study? They said, we take care of the State. We don't need any help. They are going to get back to me but they said we don't need that. Will other States do this?

General GENEGA. Sir, I don't know about Indiana in particular, but I would go to Mr. Bevill's part of the country and look at the difficulties that we have had with Georgia, Alabama and the problems that we have had. Few of those problems are confined to one State in that ultimately—for example, a proposal by Georgia to draw more water off of one body of water affects Alabama and Florida. I don't know particularly about Indiana. But I would offer the thought that many of those problems, if not most, involve more than one State.

NEW POLICIES

Mr. MYERS. One last observation here.

When the Chairman and I went in the military a good many years ago, we trained every day. But later on they had rainy day schedules, which I guess you younger people know about the rainy day schedule in training. Assuming that Congress doesn't go along with this new concept that the administration has about the authority to take care of flood management, what is the backup position for the Corps and for us if the Congress doesn't go along with that?

At what point do we have to make a decision? The likelihood of Congress implementing something between now and the time we have to mark up a bill is remote. I think we will have to mark up a bill before Congress has made the decision one way or the other. How much impact does your budget request have on the idea that Congress is going to go along with this new concept?

General GENEGA. Sir, the impact for the fiscal year 1996 budget which we are talking about today is relatively small. I believe the number is only $29 million. That is because we can make the commitment to complete the phase of study. So, for example, if we are in the feasibility phase, we continue to fund the feasibility through 1996. We just stated the administration's position that was we would not take it to construction.

If we are in the recon phase, we are asking for the dollars in fiscal year 1996 to complete the recon phase. We would not move to feasibility. The impact for 1996 is only to the amount of $29 million. In 1997, of course, having had no new construction starts for flood control in fiscal year 1996, and then obviously terminating phases, that is when we start to ramp down dramatically between 1997 and 2000.

Mr. MYERS. So it is adverse at this point. I assume we would be wasting money, that $29 million, if Congress does go along with it. On the other hand, what you are saying here is that the fact that we are not ramping up at this point and there will be some slow down in some of the projects because we have failed to start projects? I don't quite follow you on that.

General GENEGA. We have programmed for all of that. We are budgeting for all of that in fiscal year 1996. If we have a construction project that we have under construction today, we have asked for the dollars in fiscal year 1996 and plan on asking for the dollars in fiscal year 1997 to finish that. If we have a reconnaissance study underway today that will take a year to complete, we have asked for the money next year to complete that reconnaissance study, but we have taken out of the budget a piece of the $29 million for the dollars that we would use to start the feasibility study because the administration's policy is that we will only complete by phase. So we have not asked for that money.

In the sense that that time is lost, if we were later to start that feasibility study, to address your point, that time between the completion of our recon and whatever time we later started a feasibility report would be lost. Does that help a little bit, sir?

Mr. MYERS. So half a year we would lose on some of these projects, so there would really be no loss from your budget request as far as advancing these projects except we have no new starts—I guess we have one new start.

MC ALPINE AND OLMSTED LOCKS AND DAMS

I have one question about McAlpine and Olmsted. They are two that are slowed down again for some replanning. I don't quite follow that. McAlpine, they tell me is a bottleneck in the river there. And Olmsted—why do we slow down for those?

General GENEGA. I don't view that as a slow down. If I might, for the record, give you the exact dates associated with it. I don't have them at the moment, but we have gone on a very intensive effort to attempt to reduce the cost of Olmsted just deliver a quality product that is going to do what we need it to do and one that we would be proud of.

On Olmsted, we believe that we can reduce the cost from $1.2 billion to $900 million; a very significant cost reduction. McAlpine, I don't have the numbers, but I would be happy to submit them for the record. I will tell you that the industry is represented by the Inland Waterway Users Board and the industry reps that we deal with are very pleased because half the costs are shared from the Inland Waterways Trust Fund.

We have done a concerted effort but the intention is not to delay construction. The intention is to accomplish construction in what we hope is a significantly more cost-effective manner.

Mr. MYERS. So part of that cost-effectiveness is to delay, even though it may not be intentional to do that. McAlpine should have been ready for construction this year, but I don't think you requested construction money.

General GENEGA. I thought McAlpine was fiscal year 1997 all along. I would have to submit that for the record. I don't have that sir.

[The information follows:]

SCHEDULING DELAYS FOR MCALPINE LOCKS AND DAM, IN AND KY AND OLMSTED LOCKS AND DAM, IL AND KY

The PED schedule for McAlpine Locks and Dam was extended from September 1995 in the FY 1995 budget to September 1997 in the FY 1996 budget to continue the site preparation plans and specifications, initiate the plans and specifications for the new lock chamber, and continue additional design efforts to include cost reduction studies.

The current completion date for the Olmsted Locks and Dam construction is January 2006 which is the same as the FY 1995 budget. Completion dates for studies and projects scheduled for completion after FY 1997 are shown as "Being Determined" in the FY 1996 budget. They will be determined during development of the FY 1997 budget request based on our General Investigations and Construction, General outyear ceilings. This reflects results of last minute decisions reached by the Corps and OMB on how to compensate for our under execution in FY 1994 and earlier.

ADDITIONAL QUESTIONS

Mr. MYERS. Tom, do you have anything?

Mr. BEVILL. Mr. Chairman, I have several questions and I am going to submit them for the record. I have no further questions.

[The information follows:]

NEW FLOOD CONTROL CRITERIA

Mr. BEVILL. When the Committee received word of the new criteria for flood control projects, we were all deeply concerned with the shift of the cost to the local sponsor. You have heard the questions posed by the Members over the last week. Do you know of any city that could afford to pay 75% of the cost of these projects?

General GENEGA. I cannot cite you the name of any city at this time that I could definitively say could afford 75% of the cost of a flood control project. However, there are local sponsors paying 50% of project costs under the terms of the existing cost sharing rules. If a project is well enough justified and will provide economic returns from prevented damages, methods can be found for a city to finance such a project.

DFAS

Mr. BEVILL. It is my understanding the Corps was directed by DFAS to select a site for a centralized finance and accounting center. Huntsville, Alabama was one of the sites considered for this center. Huntsville would have been an excellent site since currently 17% of the Corps most knowledgeable accountants are located in the Huntsville office. Could you please comment on why the Corps final choice for the new center was Memphis, Tennessee. Can you tell me whether cost was a factor in this decision?

General GENEGA. The Secretary of Defense directed DFAS to consolidate over 300 DoD finance and accounting activities into a limited number of sites. In accounting his plan for selection of these sites, the Secretary identified four criteria: cost to the government, maintaining customer service, utilizing defense assets made available by the end of the Cold War, and a good labor supply. While Huntsville received strong consideration, it did not score as high as the selected communities and was not included in the final selection announced by DoD/DFAS on 3 May 1994. DFAS directed the Corps to choose a site from one of the 20 communities in their final selection. Six of these sites were located in the same community or very near existing Corps activities. The Corps selection of Memphis was based on being one of the six sites on the DFAS list, that had an availability of experienced accounting and finance personnel in the area, with good transportation accessibility, and a reasonable cost-of-living.

QUESTIONS FOR THE RECORD

Mr. MYERS. I think we all have several other questions we will provide for the record. Thank you very much for another year of, I guess—I will say, if Congress does not go along with this new concept, I call it a concept, it might be necessary for us before we mark up to get back together again. I guess you would be available to come back in.

General GENEGA. Absolutely. And certainly at your staff's request.

Mr. MYERS. We all have some questions today that we will put in the record for you. Thank you very much for your cooperation.

[The information follows:]

INCREASES AND NEW INITIATIVES

Mr. Myers. General, last week we heard that in order to reduce spending, the Corps was going to severely reduce its traditional role in flood control activities and in other areas such as beach erosion control. Listening to your statement, however, I heard one word and one phrase over and over again. The word was "increase" and the phrase was "new initiative." How can you defend increases in these programs, while at the same time telling us that the Corps can't afford to continue its role in flood control?

General Genega. Mr. Chairman, as was stated in previous testimony, the Administration was faced with hard choices in formulating the Fiscal Year 1996 budget. The choice was made that the budget should provide for doing well those programs that we do. While the budget proposes to turn responsibility for programs that have traditionally been Corps missions over to state and localities, we strongly believe that those items that support the remaining mission should be adequately funded. The increases and new initiatives that we have proposed accomplish that objective.

TOTAL REQUEST FOR REMAINING ITEMS

Mr. Myers: You just said that the total request for Remaining Items is about $548,000,000. However, your detailed statement states that the total for Remaining Items in the budget request is $450,700,000. What is correct?

General GENEGA: Sir, the correct dollar total for Remaining Items in the budget request is $554,542,000. We realized on the morning of the hearings that the error had been made and brought it to the attention of your staff immediately. The mistake was also carried over onto the first page of the detailed statement which has been corrected and is being resubmitted along with the answers to your questions for the record. We do offer our sincere apologies for the oversight.

GENERAL EXPENSES SAVINGS FROM STREAMLINING HQ AND DIVISION OFFICES

Mr. MYERS. For the last couple of years, we have heard a lot about your efforts to streamline operations at the headquarters and restructure the division offices. However, for General Expenses, you have requested an increase of $12,500,000 over fiscal year 1995. Will these streamlining efforts ever pay off with a reduction in expenditures for executive direction and management?

General GENEGA. Yes, they have already paid off in workyear savings and efficiencies in operations Since FY 89 we have eliminated 265 FTE from the General Expenses (GE) account, which represents a 15% reduction and an annual savings of approximately $20 million in FY 95 dollars. Among them were 30 FTE savings from closing the Engineer Automation Support Activity, Washington, D.C., and disestablishing the Board of Engineers for Rivers and Harbors. In addition, some Headquarters streamlining actions have resulted in savings to other Civil Works accounts. These actions included disestablishing the Management Engineering Branch, in Atlanta, GA.; consolidating three Regional Data Processing Centers into two, and transferring operational responsibility to WES and NPD; and absorbing the previously centralized FTE associated with Internal Review and Quality Assurance functions located in Huntsville, AL. These actions resulted in net savings of 37 FTE, with the residual staff being absorbed into the Headquarters staffing level. The HQ initiated efforts in late FY 94 to consolidate and streamline the policy review function in one location by transferring 28 FTE from the Washington Level Review Center at Fort Belvoir, VA, to the Headquarters. Additional savings are anticipated from Division Offices as policy review and technical review are discontinued at that organizational level.

In addition, the Headquarters and Division Office task forces are developing recommendations to further streamline the Headquarters and Division Offices to accomplish the FTE savings while becoming more efficient, and empowering the field. These recommendations will assist us in making smart choices in taking the Corps future workforce reductions, both in conjunction with the Streamlining Plan and the additional downsizing required to meet outyear deficit reduction outlay projections.

While the $12,500,000 increase in GE over FY 95 appears substantial, about $6.1 million of that is required to direct-fund the former centralized activities determined to be a HQ responsibility, and therefore is not an increase to the Civil program, but a change in how it is resourced. Two mission-unique programmatic items account for $900 thousand for: the HQ Relocation Project and the Corps' participation in the OMB-directed Federal Geographic Data Committee (FGDC). The Corps is a member agency of this committee, in which Civil Works participates in the creation of FGDC geospatial data policies, guidelines, and standards, which will lead to lower costs for Corps compliance germane to Civil Works projects.

The traditional GE operating budget reflects only a 3% increase over FY 95 for inflation and anticipated cost increases for personnel compensation, and increased costs of partially funding those HQ requirements previously paid from other Title 1 funds. These inflationary costs would have been greater without the reduction in personnel already achieved.

CONTINUING AUTHORITIES PROGRAM

Mr. MYERS. If I understand your statement correctly, you are proposing to terminate all the Continuing Authorities programs. Is that correct?

General GENEGA. That is correct.

Mr. MYERS. When will they be terminated?

General GENEGA. Fiscal year 1996 is the last year we will budget for these programs. Projects that have been approved for construction by the end of that fiscal year will be completed.

Mr. MYERS. How will ongoing work be treated under this proposal?

General GENEGA. Phases now underway, that is, reconnaissance study, feasibility study, design, or construction, will be completed. Projects will move on to the next phase only if they are scheduled to reach construction approval during fiscal year 1996.

Mr. MYERS. Will new projects, both studies and construction projects be initiated in fiscal year 1996?

General GENEGA. Studies may be initiated only if the resulting project can reach construction approval during fiscal year 1996. Any construction underway or approved in fiscal year 1996 or approved in prior years will started as soon as sponsors are ready and be completed in fiscal year 1996 and subsequent years. After fiscal year 1996, this work will be funded with funds carried over from prior years.

Mr. MYERS. If I understand correctly, you are proposing that the Section 205 program and the Section 14 program, which help save lives and protect property, be terminated. At the same time you are proposing an increase of $17,000,000 for the Section 1135 program and an increase of $12,500,000 in the Section 204 program. Both of those programs will benefit fish and wildlife. Do you have your priorities mixed up?

General GENEGA. These are two different types of priorities. The environment is a national problem receiving the national emphasis we believe it deserves. The Continuing Authorites programs deal with local problems and are therefore more appropriately addressed at the local level.

CORPS OF ENGINEERS FINANCIAL MANAGEMENT SYSTEM

Mr. MYERS: Were employees at the Huntsville Division and the Waterways Experiment Station able to successfully close the books for Fiscal Year 1994 using CEFMS?

General GENEGA: Yes, we closed the books for FY 94 using CEFMS at the Huntsville Division, Waterways Experiment Station, and Construction Engineering Research Laboratory. However, we had to make some manual adjustments because of errors in the tables which correlate CEFMS data to the General Ledger.

Mr. MYERS: What have you done to reduce the cost of CEFMS?

General GENEGA: The CEFMS streamlining and cost reduction effort is still in progress. Benefits to be achieved from software innovations in software maintenance tools in the areas of system change controls and records retrieval will not be realized until more Corps sites are fielded. The full impact of business improvement opportunity savings and out-year cost avoidances in the CEFMS environment also will not accrue until completion of the last CEFMS Beta test at the Missouri River Division sites in mid-1996. We did, however, save $224,000 in FY 94 by streamlining the curriculum and changing the mix of Corps and contractor personnel teaching at the CEFMS Train-The-Trainer Institute. This change will also save $972,000 in training costs over the next 3 years. In addition the USACE Cost of Doing Business Task Force has been directed to focus their efforts on improving business practices to most efficiently utilize CEFMS. They are currently looking at 10 such recommended business process improvements.

Mr. MYERS: In the last year, the deployment schedule has changed two or three times. What is the current schedule? How many times will it change during the next year?

General GENEGA: Shown below is our schedule of deployment and Major Automated Information Systems Review Council (MAISRC) events. We believe that it is achievable and are committed to it.

US Army Corps
of Engineers

REVISED CEFMS
FIELDING SCHEDULE

FEB-93/NOV-93
HND (Huntsville)

MAY-94/JUL-94
WES (Vicksburg)
CERL (Champaign)

FEB-94\JAN-95
SWD (Dallas)

FEB-94\MAR-95 ▲ CMAISRC
SWF (Fort Worth)
SWA (Albuquerque)
SWG (Galveston)

DEC-94/APR-95 ▲ DA MAISRC I & II
SWT (Tulsa)
SWL (Little Rock)
HQUSACE (Washington DC)*
HECSA*
TEC*
WRSC*
CPW*

APR-95/NOV-95
POD/POH (Hawaii)
POJ (Japan)
POF (Korea)

▲ Tescom
▲ CMAISRC III
▲ MAISRC III

JUN-95/JAN-96
SAW (Wilmington)
SAS (Savannah)
SAC (Charleston)
SAM (Mobile/SAD Atlanta)
SAJ (Jacksonville)

NOV-95/MAR-96
MRD (Omaha)
MRD/CPRO (Corps Payroll)**
MRK (Kansas City)

DEC-95/MAY-96 End Beta Test
ORD (Cincinnati)
ORL (Louisville)
ORP (Pittsburgh)
ORH (Huntington)
ORN (Nashville)

JAN-96/JUL-96
NCD (Chicago)
NCC (Chicago)
NCE (Detroit)
NCB (Buffalo)
NCR (Rock Island)
NCS (St. Paul)

APR-96/NOV-96
TAD (Winchester)
TAE (Frankfurt)
CRREL (Hanover)

JUN-96/JAN-97
LMV (Vicksburg)
LMK (Vicksburg)
LMM (Memphis)
LMS (St. Louis)
LMN (New Orleans)

NOV-96/MAR-97
NPD (Portland)
NPP (Portland)
NPS (Seattle)
NPW (Walla Walla)
NPA (Alaska)

DEC-96/MAY-97
SPD (San Francisco)
SPK (Sacramento)
SPN (San Francisco)
SPL (Los Angeles)

JAN-97/JUL-97
NED (Waltham)
NAB (Baltimore)
NAD (New York)
NAN (New York)
NAO (Norfolk)
NAP (Philadelphia)

PLEASE NOTE: The first month and calendar year indicate the projected date for loading the Work Management Structure, Real and Personal Property and Funding into CEFMS at the sites listed. The second month and calendar year indicate the projected date for conversion from COEMIS - F&A.

* National Capital Region (NCR) sites in the Washington DC Area.
** CPRO - Includes the Corps centralized payroll office.

02-23-96

Encl 1

ENVIRONMENTAL SERVICE PARTNERSHIPS PROGRAM

Mr. MYERS. Have any of the market feasibility studies completed under the Environmental Service Partnerships program resulted in communities actually obtaining environmental services through the private sector?

General GENEGA. Yes. The Corps has generally found that market feasibility studies serve as a catalyst to communities to further pursue privatization opportunities. Most communities have undertaken additional studies, procured engineering and design services and many sponsors have utilized our studies and implemented various environmental infrastructure improvements as summarized below:

Lincoln and Otero County, New Mexico - Solid Waste Landfill Services
Grand Isle, Louisiana - Water Supply System Improvement
City of Columbus/Franklin County, Ohio - Solid Waste Facility Improvement
Marion County, Ohio - Water Distribution System
Commonwealth of Kentucky - Operation and Maintenance Program for a circuit of 23 Water Treatment Plant Facilities
St. Bernard Parish, Louisiana - Waste Recycling Program
St. Peters, Missouri - Solid Waste Disposal Facility
Valleyview, Texas - Wastewater Treatment Facility
Clarendon and Sumter Counties, South Carolina - Water Supply and Water Treatment Facility

Under this program, we have been monitoring the actions of sponsors regarding implementation opportunities. We are scheduled to receive the next required submittal of implementation monitoring reports from our various field offices on April 1, 1995. These reports will be evaluated and included in a program assessment which is currently underway. This assessment will present information on the overall performance of the program and follow-on actions of sponsors in implementing privatization opportunities in the communities recently studied under this program. Subsequent implementation monitoring reports will continue to be submitted by our field offices every six months.

Mr. MYERS. Could the model that has been developed also be used by communities seeking to develop flood control projects through the private sector?

General GENEGA. The model which the Corps uses in evaluating privatization of environmental infrastructure services, was developed specifically for the Partners for Environmental Progress program. This computerized model is used exclusively for the financial analyses and evaluation of infrastructure projects involving water supply, water treatment/distribution and wastewater treatment facilities and it does not have the capability to study privatization of flood control projects. This model utilizes specific input data which pertains only to water and wastewater services such as usage, utility rates, operating costs and expenses, and other accounting type information as a basis for a financial evaluation of privatizing potential projects. However, this model could be modified and adapted for use in evaluating flood control projects.

Mr. MYERS. You have requested $615,000 in fiscal year 1996 to complete this program. Of the amount requested, how much will be used for 10 - 15 new studies you propose to initiate, how much is required to complete ongoing studies, and how much is required to undertake the program assessment and completion report?

General GENEGA. The requested funds will only be used for market feasibility studies that will be initiated in fiscal year 1996. All ongoing studies, initiated in prior years, have already been fully funded within respective fiscal year program limits and no funds from the fiscal year 1996 budget request are necessary to complete these studies. With the completion of these additional studies in fiscal year 1996, the Corps will have completed a series of reports covering a large geographic portion of the nation and through this program experience, the Corps will have evaluated a wide range of water resources and environmental infrastructure problems which could be solved through privatization financing arrangements. The Corps initiated an overall program assessment in fiscal year 1995 using information obtained from implementation reports furnished by our field offices and public sponsors which participated in this program. A program assessment has been initiated and an interim report will be completed in fiscal year 1995. A final report on the Partners for Environmental Progress program will be completed in fiscal year 1996. No program funds are required to complete this effort.

GENERAL INVESTIGATIONS

Mr. MYERS. Will the National Dredging Study form the basis for future Corps involvement in port improvement projects?

General GENEGA. The National Dredging Needs Study will assess existing and future channel dredging needs and current operation and maintenance practices for both previously constructed projects and new construction dredging for authorized but not yet constructed projects. This information could help maximize the effectiveness of our existing resources.

Mr. MYERS. Ports around the country currently compete with each other for business. Will the results of this effort in any way influence that competition by establishing priorities for port improvement?

General GENEGA. While the results of the study will not directly influence the competition between ports, they could be one factor among many that may influence the prioritization of investment in channel maintenance or newly authorized channel construction.

Mr. MYERS. Will the National Dredging Study be used in your continuing analysis of the need to retain Corps dredges?

General GENEGA. No. There is no relationship between the National Dredging Needs Study and the continuing analysis of the need to retain Corps dredges. The study addresses the need for dredging, not how the dredging will be accomplished vis-a-vis commercial or government dredges.

NATIONAL ASSESSMENT OF WATER SUPPLY DEMAND AND AVAILABILITY

Mr. MYERS. What is your authority to conduct the National Assessment of Water Supply Demand and Availability

General GENEGA. The authorities are Section 707 and Section 729 of the Water Resources Development Act of 1986.

Mr. MYERS. Are other agencies of the Federal Government contributing funds to this effort?

General GENEGA. No.

Mr. MYERS. Will it be cost-shared with the states?

General GENEGA. No.

Mr. MYERS. The Water Resources Development Act of 1986 established municipal and industrial water supply as a local problem. Why should the Federal Government become involved at this time in an area the Corps has traditionally viewed as a local responsibility?

General GENEGA. The intent of the study is to conduct a nationwide assessment of water demand and availability for all significant water uses to the year 2025. We had not intended to limit the assessment only to municipal and industrial water supply, which is the conventional understanding of the term "water supply". The use of the phrase "water supply" is intended to include the current and future availability and use of freshwater supplies for all competing purposes. There has not been such an assessment since the Water Resources Council's Study of 1978. Since that time many changes in technology, laws, population redistribution and in environmental values have resulted in significant shifts in all water uses. We need to document those shifts and undertake a detailed accounting of all water uses so that the private sector and appropriate levels of government could better evaluate the likely future demands to better manage our Nation's existing scarce freshwater supplies - at the local, state and federal levels.

POWER MARKETING ADMINISTRATIONS (PMA's) CLIMATE CHANGE ACTION PLAN

Mr. MYERS. The Administration has proposed the sale of the Power Marketing Administrations. What impact has that initiative had on your Climate Change Action Plan study?

General GENEGA. There has been no impact on our efforts at this time. What the eventual impacts are will be dependent on the details of the PMA sales initiative. Our activities are limited to developing the screen criteria for identifying the candidate projects and beginning the process this fiscal year.

Mr. MYERS. Are funds included in the Department of Energy's budget request for this effort?

General GENEGA. The Department of Energy, Electricity Policy Office, has told us that there are no funds budgeted, at this time.

Mr. MYERS How was the estimate of lease payments that could be realized as a result of this effort developed?

General GENEGA. The estimates for lease payments were developed by the Department of Energy in the President's Climate Change Action Plan.

Mr. MYERS What have you done thus far on this study?

General GENEGA. There is $600,000 in General Investigations funds to begin the screening effort this Fiscal Year. The Hydroelectric Design Center in Portland, Oregon, is responsible for developing the criteria and performing the bulk of the work, in cooperation with the hydropower districts. Additional funds have been requested for Fiscal Year 1996 to continue the evaluations Concerns with prohibitions against market pricing of Federal hydropower have limited this effort to analysis of uprating opportunities only. Enabling legislation will be required to proceed with the actual uprating development.

COOPERATION WITH OTHER WATER RESOURCE AGENCIES

Mr. MYERS. Please provide a breakdown by agency of the $600,000 required for Cooperation With Other Water Resources Agencies.

General GENEGA. We have combined the separate coordination accounts into one, and no longer break the amount down in preparing the budget. The districts have the discretion to use the funds as necessary based on thier needs. Based on the fiscal year 1992 expenditures when the accounts were separate, the proportion was Soil Conservation Service 30%, Bureau of Reclamation 29%, and Regional Basin Commissions 41%.

Mr. MYERS. How much was actually expended in fiscal year 1994 and what do you plan to expend in fiscal year 1995 for Cooperation with the Department of Agriculture, the Bureau of Reclamation, and the other agencies involved in this project?

General GENEGA. In fiscal year 1994 we spent $420,700 on cooperation with other water resource agencies. In fiscal year 1995 we have available for expenditure just over $568,000. The amount we spend is difficult to project exactly as it will depend on the amount of coordination required during the year. The amount available should be adequate to cover our needs.

Mr. MYERS. The Bureau of Reclamation is, for the most part, no longer constructing traditional reclamation projects. What is the nature of your work with the Bureau under this program?

General GENEGA. I can cite you a few specific examples of coordination with the Bureau in the last year or so. The Portland District responded to requests for information on flood damages prevented by Bureau projects in the Tulatin and Rogue River project areas. They also provided the Bureau with data on storage and reimbursement costs for Municipal and Industrial water supply in the Corps' Willamette Basin storage projects. The Seattle District coordinates with both the Bureau of Reclamation and Soil Conservation Service in addressing flood related issues in the Snohomish and Yakima River basins. The Los Angles district coordinates with the Bureau on technical matters relating to the Pinte Wash and Roosevelt Dam, AZ projects. The Sacramento district coordinated with the Bureau in preparation of their reports of flood damages prevented at their projects in the towns of Green Mountain, Willow Creek, Grand Lake-Shadow Mountain, Granby, and Ruedi Colorado. Sacramento District also consulted with the Bureau for technical and environmental documentation in areas of potential and ongoing Corps projects: on topographic mapping in Corps study areas for both potential on on going studies; and effects of Bureau dams on potential Corps flood control projects.

PLANNING ASSISTANCE TO STATES

Mr. MYERS. How much will be expended in fiscal year 1995 under the section 22 Planning Assistance to States and Indian Tribes Program?

General GENEGA. We have approximately $4,000,000 available for the Planning Assistance to States Program. Significant flood events, droughts, and increased awareness of environmental issues have caused States, local governments, and Indian Tribes to become more interested in using the Corps expertise to help solve their water-related problems. Because of this increased interest, to date, all of the funds carried over from fiscal year 1994 and about 75% of the funds appropriated for fiscal year 1995 have been committed by cost-sharing agreements. Based on our current progress in executing agreements, we expect that about 95 percent of all available funds will be obligated, and about 85 percent will be expended in fiscal year 1995.

Mr. MYERS. What is the authorized level of this program?

General GENEGA. The Planning Assistance to States Program has an authorized appropriation level of $6,000,000 per fiscal year, with no more than $300,000 per year to be expended for studies in any one State or Indian Tribe.

FERC APPLICATIONS

Mr. MYERS: Please provide for the record a list of the permit and license applications for non-Federal hydroelectric power development that you are currently reviewing.

General GENEGA: Attached is the list of 270 FERC applications for permits and license that are currently under review at respective Corps division and district offices.

Mr. MYERS: How much do you expect to expend on this activity in fiscal year 1995?

General GENEGA: The amount that the Corps expects to expend on this activity in fiscal year 1995 is $440,000.

U.S. Army Corps of Engineers

Listing of Non-Federal Hydropower

Permit and License Applications Currently Under Review

NOTE: MA, MO, NA, NO designate license applications PA and PO designates permit applications.

PENDING APPLICATIONS FOR LICENSE AND PRELIMINARY PERMIT
03/03/1995

	PROJ NO *	NAME	OWNER	ST	STREAM	TYPE OF APPLN
	137	TIGER CREEK	PACIFIC GAS & ELECTRIC CO	CA	N FK MOKELUMNE R	MO
	137	WEST POINT	PACIFIC GAS & ELECTRIC CO	CA	N FK MOKELUMNE R	MO
	137	WEST POINT	PACIFIC GAS & ELECTRIC CO	CA	N FK MOKELUMNE R	MO
	137	SALT SPGS	PACIFIC GAS & ELECTRIC CO	CA	N FK MOKELUMNE R	MO
	137	SALT SPRINGS	PACIFIC GAS & ELECTRIC CO	CA	N FK MOKELUMNE R	MO
	137	SALT SPRINGS 2	PACIFIC GAS & ELECTRIC CO	CA	N FK MOKELUMNE R	MO
	137	DOAKS RIDGE	PACIFIC GAS & ELECTRIC CO	CA	TIGER CR(N FK MOKELUMNE R)	MO
	137	ELECTRA	PACIFIC GAS & ELECTRIC CO	CA	MOKELUMNE R	MO
	137	MOKELUMNE	PACIFIC GAS & ELECTRIC CO	CA	N FK MOKELUMNE R	MO
	176	RINCON PWR	ESCONDIDO,CITY OF	CA	SAN LUIS REY R	MO
	176	LAKE HENSHAW DAM	ESCONDIDO,CITY OF	CA	SAN LUIS REY R	MO
	176	BEAR VALLEY	ESCONDIDO,CITY OF	CA	ESCONDIDO CR,PACIFIC OCEAN	MO
	460	CUSHMAN 1	TACOMA,CITY OF	WA	N FK SKOKOMISH R	MO
	460	CUSHMAN 2	TACOMA,CITY OF	WA	HOOD CANAL(N FK SKYKOMISH R)	MO
	553	DIABLO	SEATTLE,CITY OF	WA	SKAGIT R	MO
	553	ROSS	SEATTLE,CITY OF	WA	SKAGIT R	MO
	553	GORGE	SEATTLE,CITY OF	WA	SKAGIT R	MO
	553	HIGH ROSS	SEATTLE,CITY OF	WA	SKAGIT R	MO
	588	GLINES CANYON	JAMES RIVER PAPER CO,INC	WA	ELWHA R	MO
	710	SHAWANO(UPPER)	WISCONSIN POWER & LIGHT CO	WI	WOLF R	MO
	1267	BUZZARDS ROOST	GREENWOOD,COUNTY OF	SC	SALUDA R	MO
	1354	WISHON A G	PACIFIC GAS & ELECTRIC CO	CA	SAN JOAQUIN R	MO
	1354	SAN JOAQUIN 2	PACIFIC GAS & ELECTRIC CO	CA	WILLOW CR	MO
	1354	SAN JOAQUIN 3	PACIFIC GAS & ELECTRIC CO	CA	N FK WILLOW CR	MO
	1354	BROWNS CREEK	PACIFIC GAS & ELECTRIC CO	CA	BROWNS CR CNDT(S FK WILLOW CR)	MO
	1354	CRANE VALLEY	PACIFIC GAS & ELECTRIC CO	CA	N FK WILLOW CR	MO
	1354	SAN JOAQUIN 1A	PACIFIC GAS & ELECTRIC CO	CA	WILLOW CR,SAN JOAQUIN R	MO
	1388	PODLE	SOUTHERN CALIF EDISON CO	CA	LEE VINING CR,MONO LK	MO
	1389	RUSH CREEK	SOUTHERN CALIF EDISON CO	CA	RUSH CR,MONO LK	MO
	1390	LUNDY(MILL CR)	SOUTHERN CALIF EDISON CO	CA	MILL CR,MONO LK	MO
	1417	JEFFREY CANYON	CENTRAL NEB PUB P & I DIST	NE	PLATTE CNL(PLATTE R)	MO
	1417	KINGSLEY	CENTRAL NEB PUB P & I DIST	NE	N PLATTE R	MO
	1417	JOHNSON 2	CENTRAL NEB PUB P & I DIST	NE	PLATTE CNL(PLATTE R)	MO
(	1417	JOHNSON 1	CENTRAL NEB PUB P & I DIST	NE	PLATTE CNL(PLATTE R)	MO
(	1651	SWIFT LOWER	SWIFT CREEK POWER CO INC	WY	SWIFT CR,SALT R	MO
(	1651	SWIFT UPPER	SWIFT CREEK POWER CO INC	WY	SWIFT CR,SALT R	MO
*	1835	KEYSTONE	NEBRASKA PUB PWR DIST	NE	N PLATTE R	MO
*	1835	SUTHERLAND	NEBRASKA PUB PWR DIST	NE	PLATTE VLY CNL(N PLATTE R)	MO
*	1835	NORTH PLATTE	NEBRASKA PUB PWR DIST	NE	PLATTE VLY CNL(N PLATTE R)	MO
*	1862	LA GRANDE	TACOMA,CITY OF	WA	NISQUALLY R	MO
*	1862	ALDER	TACOMA,CITY OF	WA	NISQUALLY R	MO
*	1864	BOND FALLS	UPPER PENINSULA PWR CO	MI	M BR ONTONAGON R	MO
*	1864	BERGLAND	UPPER PENINSULA PWR CO	MI	W BR ONTONAGON R	MO
*	1864	CISCO	UPPER PENINSULA PWR CO	MI	CISCO BR ONTONAGON R	MO
*	1864	VICTORIA	UPPER PENINSULA PWR CO	MI	W BR ONTONAGON R	MO
*	1927	SODA SPRINGS	PACIFICORP	OR	N UMPQUA R	MO
*	1927	LEMOLO 2	PACIFICORP	OR	N UMPQUA R	MO
*	1927	LEMOLO 1	PACIFICORP	OR	N UMPQUA R	MO
*	1927	SLIDE CREEK	PACIFICORP	OR	N UMPQUA R	MO
*	1927	CLEARWATER 1	PACIFICORP	OR	CLEARWATER R	MO
*	1927	CLEARWATER 2	PACIFICORP	OR	CLEARWATER R	MO
*	1927	TOKETEE	PACIFICORP	OR	N UMPQUA R	MO

PENDING APPLICATIONS FOR LICENSE AND PRELIMINARY PERMIT
03/03/1995

PROJ NO	NAME	OWNER	ST	STREAM	TYPE OF APPLN
1927	FISH CREEK	PACIFICORP	OR	N UMPQUA R	MO
1930	KERN RIVER 1	SOUTHERN CALIF EDISON CO	CA	KERN R	MO
1962	CRESTA UNIT 3	PACIFIC GAS & ELECTRIC CO	CA	N FK FEATHER R	MO
1962	CRESTA	PACIFIC GAS & ELECTRIC CO	CA	N FK FEATHER R	MO
1962	ROCK CREEK DIV	PACIFIC GAS & ELECTRIC CO	CA	N FK FEATHER R	MO
1962	JACKASS-CH CR DIV	PACIFIC GAS & ELECTRIC CO	CA	N FK FEATHER R	MO
1962	ROCK CREEK	PACIFIC GAS & ELECTRIC CO	CA	N FK FEATHER R	MO
1962	ROCK CREEK UNIT 3	PACIFIC GAS & ELECTRIC CO	CA	N FK FEATHER R	MO
1962	CRESTA DIV	PACIFIC GAS & ELECTRIC CO	CA	N FK FEATHER R	MO
1988	COURTRIGHT DAM	PACIFIC GAS & ELECTRIC CO	CA	HELMS CR,N FK KINGS R	MO
1988	HAAS	PACIFIC GAS & ELECTRIC CO	CA	N FK KINGS R	MO
1988	KINGS RIVER	PACIFIC GAS & ELECTRIC CO	CA	N FK KINGS R	MO
1999	WAUSAU	WISCONSIN PUBLIC SERVICE CORP	WI	WISCONSIN R	MO
2019	MURPHYS	PACIFIC GAS & ELECTRIC CO	CA	ANGELS CR,CLOVEY CR	MO
2069	IRVING	ARIZONA PUB SERV CO	AZ	FOSSIL CR,VERDE R	MO
2069	CHILDS	ARIZONA PUB SERV CO	AZ	FOSSIL CR,VERDE R	MO
2113	WISCONSIN HEADWATERS	WISCONSIN VALLEY IMPROVEMENT CO	WI	WISCONSIN R	MO
2187	GEORGETOWN	PUBLIC SERVICE CO OF CO	CO	S CLEAR CR	NO
2188	HOLTER	MONTANA POWER CO	MT	MISSOURI R	MO
2188	COCHRANE	MONTANA POWER CO	MT	MISSOURI R	MO
2188	MORONY	MONTANA POWER CO	MT	MISSOURI R	MO
2188	BLACK EAGLE	MONTANA POWER CO	MT	MISSOURI R	MO
2188	RAINBOW	MONTANA POWER CO	MT	MISSOURI R	MO
2188	RYAN	MONTANA POWER CO	MT	MISSOURI R	MO
2188	MADISON 2 S	MONTANA POWER CO	MT	MADISON R	MO
2188	HEBGEN	MONTANA POWER CO	MT	MADISON R	MO
2188	HAUSER LAKE	MONTANA POWER CO	MT	MISSOURI R	MO
2205	CLARKS FALLS	CENTRAL VT PUB SERV CORP	VT	LAMOILLE R	MO
2205	PETERSON	CENTRAL VT PUB SERV CORP	VT	LAMOILLE R	MO
2205	FAIRFAX FALLS	CENTRAL VT PUB SERV CORP	VT	LAMOILLE R	MO
2205	MILTON	CENTRAL VT PUB SERV CORP	VT	LAMOILLE R	MO
2212	ROTHSCHILD	WEYERHAEUSER CO	WI	WISCONSIN R	MO
2239	KINGS	TOMAHAWK PWR & PULP CO	WI	WISCONSIN R	MO
2255	CENTRALIA	NEKOOSA PAPERS INC	WI	WISCONSIN R	MO
2256	WIS RPDS 1	CONSOLIDATED WATER PWR CO	WI	WISCONSIN R	MO
2275	SALIDA 2	PUBLIC SERVICE CO OF CO	CO	ARKANSAS R	NO
2275	SALIDA 1	PUBLIC SERVICE CO OF CO	CO	ARKANSAS R	NO
2283	DEER RIPS	CENTRAL MAINE POWER CO	ME	ANDROSCOGGIN R	MO
2283	GULF ISLAND	CENTRAL MAINE POWER CO	ME	ANDROSCOGGIN R	MO
2283	ANDROSCOGGIN NO 3	CENTRAL MAINE POWER CO	ME	ANDROSCOGGIN R	MO
2290	KERN RIVER 3	SOUTHERN CALIF EDISON CO	CA	N FK KERN R	MO
2291	PORT EDWARDS	NEKOOSA PAPERS INC	WI	WISCONSIN R	MO
2292	NEKOOSA	NEKOOSA PAPERS INC	WI	WISCONSIN R	MO
2306	NEWPORT 2	CITIZENS UTILITIES CO	VT	CLYDE R	MO
2306	SEYMOUR DAM	CITIZENS UTILITIES CO	VT	SEYMOUR LAKE OUT,CLYDE R	MO
2306	ECHO DAM	CITIZENS UTILITIES CO	VT	ECHO POND OUT,CLYDE R	MO
2306	W CHARLESTON	CITIZENS UTILITIES CO	VT	CLYDE R	MO
2306	NEWPORT 1	CITIZENS UTILITIES CO	VT	CLYDE R	MO
2315	NEAL SHOALS 5	SOUTH CAROLINA ELEC & GAS CO	SC	BROAD R	MO
2318	E J WEST	NIAGARA MOHAWK PWR CORP	NY	SACANDAGA R	MO
2320	HANNAWA	NIAGARA MOHAWK PWR CORP	NY	RAQUETTE R	MO
2320	SUGAR ISLAND	NIAGARA MOHAWK PWR CORP	NY	RAQUETTE R	MO

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2320	COLTON	NIAGARA MOHAWK PWR CORP	NY	RAQUETTE R	MO
2320	HIGLEY	NIAGARA MOHAWK PWR CORP	NY	RAQUETTE R	MO
2323	SOMERSET	NEW ENGLAND POWER CO	VT	E BR DEERFIELD R	MO
2323	SEARSBURG	NEW ENGLAND POWER CO	VT	DEERFIELD R	MO
2323	HARRIMAN	NEW ENGLAND POWER CO	VT	DEERFIELD R	MO
2323	SHERMAN	NEW ENGLAND POWER CO	MA	DEERFIELD R	MO
2323	DEERFIELD 5	NEW ENGLAND POWER CO	MA	DEERFIELD R	MO
2323	DEERFIELD 4	NEW ENGLAND POWER CO	MA	DEERFIELD R	MO
2323	DEERFIELD 3	NEW ENGLAND POWER CO	MA	DEERFIELD R	MO
2323	DEERFIELD 2	NEW ENGLAND POWER CO	MA	DEERFIELD R	MO
2325	WESTON	CENTRAL MAINE POWER CO	ME	KENNEBEC R	MO
2329	WYMAN	CENTRAL MAINE POWER CO	ME	KENNEBEC R	MO
2330	NORWOOD	NIAGARA MOHAWK PWR CORP	NY	RAQUETTE R	MO
2330	RAYMONDVILLE	NIAGARA MOHAWK PWR CORP	NY	RAQUETTE R	MO
2330	NORFOLK	NIAGARA MOHAWK PWR CORP	NY	RAQUETTE R	MO
2330	EAST NORFOLK	NIAGARA MOHAWK PWR CORP	NY	RAQUETTE R	MO
2331	99 ISLANDS	DUKE POWER CO	SC	BROAD R	MO
2332	GASTON SHOALS	DUKE POWER CO	SC	BROAD R	MO
2334	GARDNER FALLS	WESTERN MASS. ELECTRIC CO	MA	DEERFIELD R	MO
2342	CONDIT	PACIFICORP	WA	WHITE SALMON R	MO
2354	TALLULAH FALLS	GEORGIA POWER CO	GA	TALLULAH R	MO
2354	BURTON	GEORGIA POWER CO	GA	TALLULAH R	MO
2354	TUGALOO	GEORGIA POWER CO	GA	TUGALOO R	MO
2354	NACOOCHEE	GEORGIA POWER CO	GA	TALLULAH R	MO
2354	YONAH	GEORGIA POWER CO	GA	TUGALOO R	MO
2354	MATHIS & TERRORA	GEORGIA POWER CO	GA	TALLULAH R	MO
2357	WHITE RAPIDS	WISCONSIN ELEC PWR CO	MI	MENOMINEE R	MO
2360	KNIFE FALLS	MINNESOTA PWR AND LT CO	MN	ST LOUIS R	MO
2360	RICE LAKE	MINNESOTA PWR AND LT CO	MN	BEAVER R	MO
2360	SCANLON	MINNESOTA PWR AND LT CO	MN	ST LOUIS R	MO
2360	ISLAND LAKE	MINNESOTA PWR AND LT CO	MN	CLOQUET R	MO
2360	BOULDER LAKE	MINNESOTA PWR AND LT CO	MN	OTTER R	MO
2360	WHITEFACE	MINNESOTA PWR AND LT CO	MN	WHITEFACE R	MO
2360	THOMSON	MINNESOTA PWR AND LT CO	MN	ST LOUIS R	MO
* 2360	FOND DU LAC	MINNESOTA PWR AND LT CO	MN	ST LOUIS R	MO
* 2360	FISH LAKE	MINNESOTA PWR AND LT CO	MN	BEAVER R	MO
* 2363	CLOQUET	POTLATCH CORP	MN	ST LOUIS R	MO
* 2385	GLENS FALLS	FINCN PRUYN AND CO,INC	NY	HUDSON R	MO
* 2389	EDWARDS DIVISION	EDWARDS MFG & AUGUSTA,CITY OF	ME	KENNEBEC R	MO
* 2390	BIG FALLS	NORTHERN STATES POWER CO	WI	FLAMBEAU R	MO
* 2394	CHALK HILL	WISCONSIN ELEC PWR CO	MI	MENOMINEE R	MO
* 2395	PIXLEY	FLAMBEAU PAPER CORP	WI	N FK FLAMBEAU R	NO
* 2396	PIERCE MILLS	CENTRAL VT PUB SERV CORP	VT	PASSUMPSIC R	NO
* 2399	ARNOLD FALLS	CENTRAL VT PUB SERV CORP	VT	PASSUMPSIC R	NO
* 2402	PRICKETT	UPPER PENINSULA PWR CO	MI	STURGEON R	MO
* 2403	VEAZIE	BANGOR HYDRO ELECTRIC CO	ME	PENOBSCOT R	MO
* 2404	NINTH STREET	THUNDER BAY PWR CO	MI	THUNDER BAY R	MO
* 2404	FOUR MILE DAM	THUNDER BAY PWR CO	MI	THUNDER BAY R	MO
* 2404	HUBBARD LAKE	THUNDER BAY PWR CO	MI	LOWER S BR THUNDER BAY R	MO
* 2404	UPPER SOUTH DAM	THUNDER BAY PWR CO	MI	UPPER S BR THUNDER BAY R	MO
* 2404	NORWAY POINT	THUNDER BAY PWR CO	MI	THUNDER BAY R	MO
* 2406	SALUDA	DUKE POWER CO	SC	SALUDA R	MO

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2417	HAYWARD	NORTHERN STATES POWER CO	WI	NAMEKAGON R	NO
2419	HILLMAN	THUNDER BAY PWR CO	MI	THUNDER BAY R	NO
2421	LOWER HYDRO	FLAMBEAU PAPER CORP	WI	N FK FLAMBEAU R	NO
2431	BRULE	WISCONSIN ELEC PWR CO	MI	BRULE R	MO
2433	GRAND RAPIDS	WISCONSIN PUBLIC SERVICE CORP	MI	MENOMINEE R	MO
2438	SENECA FALLS(LOCK 3)	NY ST ELEC & GAS CORP	NY	SENECA CNL(SENECA R)	MO
2438	WATERLOO(LOCK 4)	NY ST ELEC & GAS CORP	NY	SENECA CNL(SENECA R)	MO
2442	WATERTOWN	WATERTOWN,CITY OF	NY	BLACK R	MO
2444	WHITE RIVER	NORTHERN STATES POWER CO	WI	WHITE R	NO
2456	AYERS ISLAND	PUBLIC SERVICE CO OF NH	NH	PEMIGEWASSET R	MO
2458	MILLINOCKET	GREAT NORTHERN PAPER INC	ME	W BR PENOBSCOT R	MO
2458	NORTH TWIN	GREAT NORTHERN PAPER INC	ME	W BR PENOBSCOT R	MO
2458	MILLINOCKET DAM	GREAT NORTHERN PAPER INC	ME	MILLINOCKET STR,W BR PENOBSCOT R	MO
2458	EAST MILLINOCKET	GREAT NORTHERN PAPER INC	ME	W BR PENOBSCOT R	MO
2458	DOLBY	GREAT NORTHERN PAPER INC	ME	W BR PENOBSCOT R	MO
2465	HOLIDAYS BRIDGE	DUKE POWER CO	SC	SALUDA R	MO
2473	CROWLEY RAPIDS	FLAMBEAU PAPER CORP	WI	N FK FLAMBEAU R	NO
2474	FULTON	NIAGARA MOHAWK PWR CORP	NY	OSWEGO R	MO
2474	MINETTO	NIAGARA MOHAWK PWR CORP	NY	OSWEGO R	MO
2474	VARICK	NIAGARA MOHAWK PWR CORP	NY	OSWEGO R	MO
2475	THORNAPPLE	NORTHERN STATES POWER CO	WI	FLAMBEAU R	NO
2476	JERSEY	WISCONSIN PUBLIC SERVICE CORP	WI	TOMAHAWK R	NO
2482	SPIER FALLS	NIAGARA MOHAWK PWR CORP	NY	HUDSON R	MO
2482	SHERMAN ISLAND	NIAGARA MOHAWK PWR CORP	NY	HUDSON R	MO
2486	PINE	WISCONSIN ELEC PWR CO	WI	PINE R	MO
2493	SNOQUALMIE FLS 1	PUGET SOUND PWR AND LT CO	WA	SNOQUALMIE R	MO
2493	SNOQUALMIE FLS 2	PUGET SOUND PWR AND LT CO	WA	SNOQUALMIE R	MO
2494	WHITE RIVER 1	PUGET SOUND PWR AND LT CO	WA	PWR CNL(WHITE R)	MA
2494	WHITE RIVER 2	PUGET SOUND PWR AND LT C	WA	PWR CNL(WHITE R)	MA
2496	LEABURG	EUGENE,CITY OF	OR	MCKENZIE R	MO
2506	ESCANABA 3	MEAD CORP	MI	ESCANABA R	MO
2506	ESCANABA 4	MEAD CORP	MI	ESCANABA R	MO
2506	ESCANABA 1	MEAD CORP	MI	ESCANABA R	MO
2518	WALTERVILLE	EUGENE,CITY OF	OR	MCKENZIE R	MO
* 2513	ESSEX 19	GREEN MOUNTAIN PWR CORP	VT	WINOOSKI R	MO
* 2522	JOHNSON FALLS	WISCONSIN PUBLIC SERVICE CORP	WI	PESHTIGO R	MO
* 2523	OCONTO FALLS	N.E.W.HYDRO INC	WI	OCONTO R	MA
* 2523	OCONTO FALLS(UPPER)	WISCONSIN ELEC PWR CO	WI	OCONTO R	NO
* 2525	CALDRON FALLS	WISCONSIN PUBLIC SERVICE CORP	WI	PESHTIGO R	MO
* 2527	SKELTON	CENTRAL MAINE POWER CO	ME	SACO R	MO
* 2529	BONNY EAGLE	CENTRAL MAINE POWER CO	ME	SACO R	MO
* 2534	MILFORD	BANGOR HYDRO ELECTRIC CO	ME	PENOBSCOT R	MO
* 2535	STEVENS CREEK	SOUTH CAROLINA ELEC & GAS CO	GA	SAVANNAH R	MO
* 2536	LITTLE QUINNESEC FALLS	NIAGARA OF WIS PAPER CORP	WI	MENOMINEE R	MO
* 2538	BEEBEE ISLAND	NIAGARA MOHAWK PWR CORP	NY	BLACK R	MO
* 2539	SCHOOL ST	NIAGARA MOHAWK PWR CORP	NY	MOHAWK R	MO
* 2546	SANDSTONE RAPIDS	WISCONSIN PUBLIC SERVICE CORP	WI	PESHTIGO R	MO
* 2550	WEYAUWEGA	WISCONSIN ELEC PWR CO	WI	WAUPACA R	NO
* 2551	BUCHANAN	IN AND MI ELEC CO	MI	ST JOSEPH R	MO
* 2552	FORT HALIFAX	CENTRAL MAINE POWER CO	ME	SEBASTICOOK R	NO
* 2554	FEEDER DAM	MOREAU MANUFACTURING CORP	NY	HUDSON R	MO
* 2555	AUTOMATIC(MESALONSK 4)	KENNEBEC WATER DISTRICT	ME	MESSALONSKEE STR,KENNEBEC R	NO

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2556	UNION GAS(MESALONSK 5)	CENTRAL MAINE POWER CO	ME	MESSALONSKEE STR,KENNEBEC R	NO
2557	RICE RIPS(MESALONSK 3)	CENTRAL MAINE POWER CO	ME	MESSALONSKEE STR,KENNEBEC R	MO
2559	OAKLAND(MESALONSK 2)	CENTRAL MAINE POWER CO	ME	MESSALONSKEE STR,KENNEBEC R	NO
2560	POTATO RAPIDS	WISCONSIN PUBLIC SERVICE CORP	WI	PESHTIGO R	NO
2569	BLACK RIVER	NIAGARA MOHAWK PWR CORP	NY	BLACK R	MO
2569	DEFERIET	NIAGARA MOHAWK PWR CORP	NY	BLACK R	MO
2569	HERRINGS	NIAGARA MOHAWK PWR CORP	NY	BLACK R	MO
2569	SEWALLS ISLAND	NIAGARA MOHAWK PWR CORP	NY	BLACK R	MO
2569	KAMARGO	NIAGARA MOHAWK PWR CORP	NY	BLACK R	MO
2572	RIPOGENUS	GREAT NORTHERN PAPER INC	ME	W BR PENOBSCOT R	MO
2579	TWIN BRANCH	IN AND MI ELEC CO	IN	ST JOSEPH R	MO
2581	PESHTIGO	WISCONSIN PUBLIC SERVICE CORP	WI	PESHTIGO R	NO
2582	STATION 2	ROCHESTER GAS & ELEC CORP	NY	GENESEE R	MO
2583	STATION 5	ROCHESTER GAS & ELEC CORP	NY	GENESEE R	MO
2584	STATION 26	ROCHESTER GAS & ELEC CORP	NY	GENESEE R	MO
2590	WISCONSIN R DIV	CONSOLIDATED WATER PWR CO	WI	WISCONSIN R	MO
2595	HIGH FALLS	WISCONSIN PUBLIC SERVICE CORP	WI	PESHTIGO R	MO
2596	STATION 160	ROCHESTER GAS & ELEC CORP	NY	GENESEE R	NO
2607	SPENCER MOUNTAIN	DUKE POWER CO	NC	S FK CATAWBA R	NO
2608	WEST SPRINGFIELD	DECORATIVE SPECIALTIES INTERNATION	MA	WESTFIELD R	NO
2616	JOHNSONVILLE	NIAGARA MOHAWK PWR CORP	NY	HOOSIC R	MO
2616	SCHAGHTICOKE	NIAGARA MOHAWK PWR CORP	NY	HOOSIC R	MO
2640	UPPER HYDRO	FLAMBEAU PAPER CORP	WI	N FK FLAMBEAU R	NO
2643	BEND	PACIFICORP	OR	DESCHUTES R	NO
2645	MOSHIER	NIAGARA MOHAWK PWR CORP	NY	BEAVER R	MO
2645	SOFT MAPLE	NIAGARA MOHAWK PWR CORP	NY	BEAVER R	MO
2645	EFFLEY	NIAGARA MOHAWK PWR CORP	NY	BEAVER R	MO
2645	ELMER	NIAGARA MOHAWK PWR CORP	NY	BEAVER R	MO
2645	TAYLORVILLE	NIAGARA MOHAWK PWR CORP	NY	BEAVER R	MO
2645	BELFORT	NIAGARA MOHAWK PWR CORP	NY	BEAVER R	MO
2645	HIGH FALLS	NIAGARA MOHAWK PWR CORP	NY	BEAVER R	MO
2645	EAGLE	NIAGARA MOHAWK PWR CORP	NY	BEAVER R	MO
2671	MOOSEHEAD LAKE	KENNEBEC WTR PWR CO	ME	KENNEBEC R	NO
2683	ELWHA	JAMES RIVER PAPER CO,INC	WA	ELWHA R	MA
* 2687	PIT 1	PACIFIC GAS & ELECTRIC CO	CA	PIT R	MO
* 2699	ANGELS	PACIFIC GAS & ELECTRIC CO	CA	ANGELS CR,CLOVEY CR	NO
* 2705	NEWHALEM CREEK	SEATTLE,CITY OF	WA	NEWHALEM CR,SKAGIT R	MO
* 2710	ORONO	BANGOR HYDRO ELECTRIC CO	ME	STILLWATER R,PENOBSCOT R	MO
* 2711	TREGO	NORTHERN STATES POWER CO	WI	NAMEKAGON R	NO
* 2712	STILLWATER	BANGOR HYDRO ELECTRIC CO	ME	STILLWATER R,PENOBSCOT R.	MO
* 3194	FOOTTRAIL	KEATING,JOSEPH M	CA	SILVER FORK,S FK AMERICAN R	MA
* 3258	PINE CREEK	KEATING,JOSEPH M	CA	PINE CR,OWENS R	MA
* 3574	TIBER	CONTINENTAL HYDRO CORP	MT	MARIAS R	MA
* 3721	NOOKSACK FALLS	PUGET SOUND PWR AND LT CO	WA	N FK NOOKSACK R	MA
* 3913	THUNDER CREEK	PUGET SOUND PWR AND LT CO	WA	THUNDER CR,BAKER R	MA
* 4270	BOULDER CREEK	MOUNTAIN RHYTHM RESOURCES	WA	BOULDER CR,N FK NOOKSACK R	MA
* 4282	DEADHORSE CREEK	MOUNTAIN WATER RESOURCES	WA	DEADHORSE CR,N FK NOOKSACK R	MA
* 4312	CANYON CREEK	WATERSONG RESOURCES	WA	CANYON CR,N FK NOOKSACK R	MA
* 4376	ROCKY CREEK	HIGH COUNTRY RESOURCES	WA	ROCKY CR,SKAGIT R	MA
* 4437	DIOBSUD CREEK	GLACIER ENERGY CO	WA	DIOBSUD CR,SKAGIT R	MA
* 4628	WELLS CREEK	MCGREW & ASSOC	WA	WELLS CR,N FK NOOKSACK R	MA

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4715	FELTS MILLS UPPER	FELTS MILLS ENERGY PTNS L.P.	NY	BLACK R	MA
4715	FELTS MILLS LOWER	FELTS MILLS ENERGY PTNS L.P.	NY	BLACK R	MA
4738	GLACIER CREEK	MCGREW,MCMASTER KOCH	WA	GLACIER CR,N FK NOOKSACK R	MA
5090	SHELLEY	IDAHO FALLS,CITY OF	ID	SNAKE R	MA
5772	AUGUSTA CANAL	AUGUSTA,CITY OF	GA	AUGUSTA CNL(SAVANNAH R)	MA
5797	STAR FALLS	B & C ENERGY INC	ID	SNAKE R	MA
5984	OSWEGO FALLS W	NIAGARA MOHAWK PWR CORP	NY	OSWEGO R	MA
5904	OSWEGO FALLS E	NIAGARA MOHAWK PWR CORP	NY	OSWEGO R	MA
6453	CAUSEY	WEBER BASIN WTR CONS DIST	UT	S FK OGDEN R	NA
6984	BOULDER CREEK	CASCADE GROUP	WA	BOULDER CR,CASCADE R	MA
7463	TONTO PS	GENTRY RESOURCES CORP	AZ	SALT R	PA
7589	SHINGLE CREEK	BOYER,PAUL S	ID	SHINGLE CR,RAPID R	NA
7824	WILLOW SPRING	GENTRY RESOURCES CORP	AZ	VERDE R	PA
7025	INDIAN SPRING	GENTRY RESOURCES CORP	AZ	VERDE R	PA
7826	SAGUARO	GENTRY RESOURCES CORP	AZ	SALT R	PA
8144	CROSS COUNTY	AMADOR,COUNTY OF	CA	DRY CR,MOKELUMNE R	MA
8144	DEVILS NOSE	AMADOR,COUNTY OF	CA	N FK MOKELUMNE R	MA
9787	JORDAN CREEK LOWER	SCOTT PAPER CO	WA	JORDAN CR,CASCADE R	MA
9940	ELKHORN	JEFFERSON CO PUD 1	WA	DOSEWALLIPS R	MA
10081	CLAVEY RIVER	TUOLUMNE,COUNTY OF ET AL	CA	CLAVEY R,TUOLUMNE R	MA
10100	IRENE CREEK	CASCADE RIVER HYDRO	WA	IRENE CR,CASCADE R	MA
10199	SALT CAVES	KLAMATH FALLS,CITY OF	OR	KLAMATH R	MA
10269	JACKMAN CREEK	WASH HYDRO DEV CO	WA	JACKMAN CR,SKAGIT R	MA
10311	ROCKY CREEK	SKAGIT RIVER HYDRO	WA	ROCKY CR,SKAGIT R	MA
10395	MELDAHL L&D	AUGUSTA,CITY OF	KY	OHIO R	MA
10416	ANDERSON CREEK	WASH HYDRO DEV CO	WA	ANDERSON CR,BAKER R	MA
10418	DOCK STREET DAM	HARRISBURG,CITY OF	PA	SUSQUEHANNA R	MA
10455	RIVER MTN	JDJ ENERGY CO	AR	ARKANSAS R	MA
10461	PARISHVILLE	NIAGARA MOHAWK PWR CORP	NY	W BR ST REGIS R	MA
10462	ALLENS FALLS	NIAGARA MOHAWK PWR CORP	NY	W BR ST REGIS R	MA
10467	LAKE PLEASANT	GENTRY RESOURCES CORP	AZ	AGUA FRIA R	PA
10536	ENLOE	OKANOGAN CO PUD 1	WA	SIMILKAMEEN R	MA
10625	TANEUM CHUTE	KITTITAS RECLAMATION DIST	WA	TANEUM CHUTE(YAKIMA R)	NA
10646	MELDAHL L&D	VANCEBURG,CITY OF CORP	KY	OHIO R	MA
10703	YELM	CENTRALIA,CITY OF	WA	NISQUALLY R	MA
10715	UPPER WAILUA	ISLAND PWR CO INC	HI	MAHAE ST,N FK WAILUA R	PA
10725	DRY FORK	LITTLE HORN ENERGY WY,INC	WY	DRY FK,LITTLE BIGHORN R	MA
10756	BLUE DIAMOND SOUTH	BLUE DIAMOND S PMP STG PWR CO INC	NV	NO STREAM	MA
10772	BOULDER RAPIDS	HYDRO-POWER ELEC OF NEVADA INC	ID	SNAKE R	MA
10808	EDENVILLE	WOLVERINE HYDROELECTRIC CORP	MI	TITTABAWASSEE R,TOBACCO R	MA
10809	SECORD	WOLVERINE HYDROELECTRIC CORP	MI	TITTABAWASSEE R	NA
10810	SMALLWOOD	WOLVERINE HYDROELECTRIC CORP	MI	TITTABAWASSEE R	MA
10819	DWORSHAK	IDAHO WATER RES BOARD	ID	N FK CLEARWATER R	MA
10822	COLLINSVILLE UPPER	SUMMIT HYDROPOWER	CT	FARMINGTON R	NA
10823	COLLINSVILLE LOWER	SUMMIT HYDROPOWER	CT	FARMINGTON R	NA
10847	CRYSTAL CREEK	CREAMER & NOBLE ENERGY,INC	CA	NO STREAM	MA
10849	EMPIRE	HYDRO POWER ELEC OF NEVADA,INC	ID	SNAKE R	MA
10854	CATARACT	UPPER PENINSULA PWR CO	MI	M BR ESCANABA R	MA
10856	AU TRAIN	UPPER PENINSULA PWR CO	MI	AU TRAIN R	NA
10865	WARM CREEK	WARM CREEK HYDRO,INC	WA	WARM CR,M FK NOOKSACK R	MA
10866	WEST PHOENIX(OSWEGO L&D)	PHOENIX HYDRO CORP	NY	OSWEGO R	PA

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* 10867	HOLLIDAY(NOBLEVILLE)	HOLLIDAY HISTORIC RESTORATION ASSOC	IN	W FK WHITE R	NA
* 10871	WATSON MILL	DAVIS,ROBERT A.,ET AL	GA	S FK BROAD R	NA
* 10872	TOWALIGA	DAVIS,ROBERT A.,ET AL	GA	TOWALIGA R	MA
* 10873	CULLASAJA	DAVIS,ROBERT A.,ETAL	NC	CULLASAJA R	NA
* 10893	INGLIS BYPASS SPILLWAY	HY POWER ENERGY CO	FL	INGLIS BY-PASS CHANNEL	MA
* 10930	KANAKA RAPIDS	L.B.INDUSTRIES,INC	ID	SNAKE R	MA
* 10942	MARTIN CREEK	SKYKOMISH RIVER HYDRO	WA	MARTIN CR,TYE R	MA
* 10979	HERON	L.B.INDUSTRIES	NM	WILLOW CR,RIO CHAMA	PA
* 10980	CABALLO	L.B.INDUSTRIES,INC	NM	RIO GRANDE	PA
* 10981	ORONO	BANGOR HYDRO ELECTRIC CO	ME	STILLWATER R,PENOBSCOT R	MA
* 10981	BASIN MILLS	BANGOR HYDRO ELECTRIC CO	ME	PENOBSCOT R	MA
* 10981	VEAZIE	BANGOR HYDRO ELECTRIC CO	ME	PENOBSCOT T	MA
* 11011	SAN JUAN	WESTERN RENEWABLE ENERGY CO	CO	UNCOMPAHGRE R	PA
* 11043	SARANAC MILL	SARANAC MILL DAM HYDRO WATT ASSOC	RI	BLACKSTONE R	PA
* 11053	MELDAHL L&D	HAMILTON,CITY OF	KY	OHIO R	MA
* 11058	FITCHBURG 4	A.L.L.NATURAL RESOURCES	MA	N NASHUA R	NA
* 11076	BARRIER	TACOMA,CITY OF	WA	COWLITZ R	MA
* 11080	EAGLE MOUNTAIN	EAGLE CREST ENERGY CO	CA	COLORADO R AQUE	MA
* 11085	NORTH BLACK RIVER	BLACK RIVER HYDRO CORP	NY	BLACK R	PA
* 11087	POORS ISLAND	KAMARGO CORP	NY	BLACK R	PA
* 11120	MIDDLEVILLE	CAMERON GAS & ELECTRIC CO	MI	THORNAPPLE R	NA
* 11126	BEAR RIVER CANAL	NAVICKES,EDWARDS	CA	BEAR R CNL(BEAR R)	XX
* 11131	PALISADES	S & F POWER CO	ID	SNAKE R	PA
* 11132	EUSTIS	CONSOLIDATED HYDRO MAINE INC	ME	N BR DEAD R	NA
* 11142	ESTES LAKE	CONSOLIDATED HYDRO MAINE INC	ME	MOUSAM R	NA
* 11150	SMITHVILLE	CAMERON GAS & ELEC INC	MI	GRAND R	NA
* 11150	MIX	CAMERON GAS & ELEC INC	MI	GRAND R	MA
* 11162	PRAIRIE DU SAC	WISCONSIN POWER & LIGHT CO	WI	WISCONSIN R	MA
* 11163	SOUTH BERWICK	CONSOLIDATED HYDRO INC	ME	SALMON FALLS R	NA
* 11175	CROWN MILL	CROWN HYDRO CO	MN	MISSISSIPPI R	MA
* 11181	LORELLA PS	ENERGY STORAGE PARTNERS	OR	LOST R	MA
* 11213	BARBERVILLE	HOHMAN,THOMAS	NY	POESTENKILL CR,HUDSON R	NA
* 11225	SOUTH FORK DEER CREEK	MOUNTAIN ENERGY INC	OR	S FK DEER CR,ILLINOIS R	PA
* 11240	WEST RUTLAND	SWANTON,VILLAGE OF	VT	CASTLETON R	PA
* 11241	WEST RUTLAND	VERMONT HYDRO ASSOC	VT	CASTLETON R	PA
* 11264	COOLEEMEE	TURBINE INDUSTRIES,INC	NC	S YADKIN R	NA
* 11286	ABBEVILLE	ABBEVILLE,CITY OF	SC	ROCKY R	MA
* 11300	LABARGE	COMMONWEALTH POWER CO	MI	THORNAPPLE R	NA
* 11313	APTHORP	WHITE MOUNTAIN HYDRO CO	NH	AMMONOOSUC R	NA
* 11322	COLUMBIA WATER SUPPLY	TUOLUMNE UTILITIES DIST	CA	COLUMBIA DTH(S FK STANISLAUS R)	NA
* 11323	TROPICANA	BLUE DIAMOND ASSOC	NV	NO STREAM	MA
* 11346	FORT DODGE MILL	FORIA HYDRO CORP	IA	DES MOINES R	NA
* 11359	MURPHY	NORTHROP,ENGINEERING CORP	NH	CONNECTICUT R	PA
* 11367	SHEEP MOUNTAIN	PEAK POWER CORP,ET AL	NV	NO STREAM	MA
* 11402	CRYSTAL FALLS	CRYSTAL FALLS,CITY OF	MI	PAINT R	NA
* 11408	BENNETTS BRIDGE	NIAGARA MOHAWK PWR CORP	NY	SALMON R	MA
* 11408	LIGHTHOUSE HILL	NIAGARA MOHAWK PWR CORP	NY	SALMON R	MA
* 11428	ST LOUIS	ST LOUIS,CITY OF	MI	PINE R	NA
* 11430	DALLES JBS	NORTH WASCO CO PEOPLE'S UD	WA	COLUMBIA R	PA
* 11433	SANDY RIVER	MADISON ELECTRIC WORKS	ME	SANDY R	NA
* 11446	PITTSFORD FURNACE	ALLEN HITCHCOCK	VT	FURNACE BROOK,OTTER CR	PA

PENDING APPLICATIONS FOR LICENSE AND PRELIMINARY PERMIT

03/03/1995

PROJ NO	NAME	OWNER	ST	STREAM	TYPE OF APPLN
11446	CUFFS RUN	MID-ATLANTIC ENERGY ENGRS	PA	CUFFS RUN,SUSQUEHANNA R	PA
11452	ANGELS CAMP	NORTHERN CALIFORNIA PWR AGENCY	CA	ANGELS	NA
11462	DALLES JBS	KLICKITAT COUNTY P.U.D	WA	COLUMBIA R	PA
11468	CROSSROADS CONDUIT	NORTH SIDE CANAL COMPANY,LTD	ID	U CANAL/N SIDE MN CNL	PA
11469	HEADWORKS CONDUIT	NORTH SIDE CANAL COMPANY,LTD	ID	MAIN CANAL	PA
11470	JEROME	NORTH SIDE CANAL COMPANY,LTD	ID	U CANAL/N SIDE MN CANAL	PA
11470	JEROME	NORTH SIDE CANAL COMPNAY,LTD	ID	U CANAL/N SIDE MN CANAL	PA
11472	BURNHAM	CONSOLIDATED HYDRO MAINE,INC	ME	SEBASTICOOK R	NA
11475	CARVER FALLS	CENTRAL VT PUB SERV CORP	NY	POULTNEY R	NA
11477	UTICA	NORTHERN CALIFORNIA PWR AGENCY	CA	ANGELS CR,CLOVEY CR	NA
11478	SILVER LAKE	CENTRAL VT PUB SERV CORP	VT	SUCKER BK,NESHOBE R	NA
11479	HAWKINSVILLE	TRENTON FALLS HYDROELECTRIC CO	NY	BLACK R	PA
11481	CUFFS RUN	CUFFS RUN ENERGY PARTNERS	PA	CUFFS RUN,SUSQUEHAMAR	PA
11482	MARCAL	CONSOLIDATED HYDRO MAINE,INC	ME	LITTLE ANDROSCOGGIN R	NA
11484	OCONTO FALLS	ENERGIE DEVELOPMENT CO INC	WI	OCONTON R	NA
11486	NEW SAVANNAH BLUFF	PACOLET RIVER PWR CO INC	GA	SAVANNAH R	PA
11488	WYNANTSKILL	JORDAN,MARGARET	NY	WYNANTS KILL,HUDSON R	PA
11490	AUGUSTA CANAL DIVERSION	FALL LINE HYDRO COMPANY INC	GA	AUGUSTA CNL(SAVANNAH R)	PA
11491	WHITE RIVER	WHITE RIVER FALLS HYDRO,INC	OR	WHITE R	PA
11495	CLEARWATER CREEK	NOOKSACK RIVER HYDRO INC	WA	CLEARWATER CR,N FK NOOKSACK R	NA
11496	OCONTO FLS	OCONTO FALLS,CITY OF	WI	OCONTO R	NA
11501	CARGILL FALLS	PUTNAM HYDROPOWER INC	CT	QUINEBAUG R	PA
11502	RED ROCK	ELY,TOWN OF	IA	DES MOINES R	PA
11504	LAKE ELSINORE PS	ELSINORE VALLEY MUN. WATER DIST	CA	LAKE ELSINORE	PA
11505	WINSOR DAM	SUMMIT HYDROPOWER INC	MA	SWIFT R	PA
11506	ATLANTA	CENTRAL IDAHO ELEC.CO	ID	M FK BOISE R	PA
11507	ATLANTA POWER STATION	ATLANTA POWER CO,INC	ID	M FK BOISE R	PA
11508	WOLF LAKE	ALASKA PWR & TELEPHONE CO	AK	WOLF CR	PA
11509	ALBANY	CITY OF ALBANY	OR	CALAPOOIA R;WILLAMETTE	NA
11510	ALLISON	ALASKA BUSINESS&INDUSTRIAL DEV.CORP	AK	ALLISON CR	PA
11511	UNIONTOWN L&D	HYDRO MATRIX PARTNERSHIP,LTD	KY	OHIO R	PA
11512	MCKENZIE	BIGELOW,JOHN H	OR	MCKENZIE R	NA
11513	CANYON CREEK	MUSA,WALTER JR	WA	CANYON CR,LEWIS R	PA
11514	ALLEGAN DAM	IMPERIAL CARVING CO	MI	KALAMAZOO R	NA
11515	DOMINGUEZ	DOMINGUEZ HYDROELECTRIC ASSOC,INC	CO	GUNNISON R	PA
11515	DOMINGUEZ	DOMINGUEZ HYDROELECTRIC ASSOC,INC	CO	GUNNISON R	PA
11516	IRVING	COMMONWEALTH POWER CO	MI	THORNAPPLE R	NA
11517	COOS	ANDROSCOGGIN HYDROELECTRIC CO,INC	NH	ANDROSCOGGIN R	PA

270 projects

SPECIAL INVESTIGATIONS

Mr. MYERS. Excluding the review of hydropower permit applications, how much did you expend in fiscal year 1994 and how much do you expect to expend in fiscal year 1995 on special investigations? Please provide a list of those special investigations.

General GENEGA. The amount expended for special investigations under the General Investigations account in fiscal year 1994 was $2,713,286. The estimated expenditures for fiscal year 1995 for this same program is $3,187,000. The funds received for special investigations are allotted to some 46 Corps field offices in an average annual amount of approximately $46,000 each, the amounts vary from a low of $13,000 to a high of $147,000. I will provide for the record a representative list of special investigations.

(The information follows:)

Investigate problems relating to flood damage reduction at various location in IL and MO.

Provide information, guidance, and assistance to non-federal interests in KS and NE on water resources issues.

Coordinate with the Kansas Water Office regarding additional water supply at Kanoplis and Wilson Lakes, KS.

Continue coordination activities with the Great Lakes Commission on economic development, Great Lakes Fisheries Commission on habitat restoration and enhancement, and the EPA's Great Lakes Program Office on water quality agreement.

Review and provide input to local waterfront revitalization plans at Buffalo,NY.

Continued efforts in connection with the 1993 Midwest floods such as attendance at meetings, correspondence, and preparatory efforts for consideration of unfunded activities in IA, IL, MO, and WS.

Responded to several request for technical assistance and advice from Indian tribes.

Worked with the National Park Service on the Mississippi National River and Recreation Area in the vicinity of Minneapolis-St. Paul.

SPECIAL INVESTIGATIONS (Continued)

Reviewed other agencies EIS's for various projects for the Department of Transportation and the Fish and Wildlife Service.

Reviewed Coastal Management plans and responded to inquires on unfunded items such as cargo transportation data and hydropower development potential.

Attended council meetings in connection with the State of Oregon instituted Watershed Health Initiative Program.

Prepared responses to numerous Congressional, Federal agencies, State and local interest inquires relating to flooding and erosion problems.

Responded to numerous requests concerning the applicability of federal government programs to specific problem areas.

Conducted site visits to prepare responses to Congressional, State, and local inquires.

Provided State and local governments flood hydrology information on streams where the Corps had no projects, but had previously conducted hydrologic studies.

Participated as a stakeholder in the interagency ecosystem management task force's Pacific Northwest Forests Case study as direct in the fiscal year 1995 appropriations.

Funded the salary and travel expenses of three Corps employees to support the efforts of the Interagency Scientific Assessment and Strategy Team in response to flooding in the Mississippi River Basin.

Completed an OMB directed analysis of the economic and environmental effectiveness of shoreline protection and beach erosion control projects.

Contracted for a study related to the ownership and financing study for the Washington Aqueduct.

Continued coordination on the Chesapeake Bay Program initiative.

Conducted a special investigation of special case navigation needs of the Pacific Islanders.

GULF OF MEXICO PROGRAM

Mr. MYERS. How much has been requested in FY 96 by the other Federal agencies involved in the Gulf of Mexico program?

General GENEGA. The EPA Gulf of Mexico program budget for FY 96 is $4,158,000 and is part of the Coastal Environmental Management Program Element. In addition, salaries of EPA personnel involved in the program are funded through the EPA Office of Water at a cost of $990,000. Other agencies have not made direct requests for funding, but have funded activities under various authorities. The USF&WL, NOAA, USDA, and FDA all have full-time employees assigned to the Gulf of Mexico Program Office at the Stennis Space Center. These and other agencies also have a number of other individuals who participate part-time on various committees.

Mr. MYERS. What is the authority to participate in this program?

General GENEGA. We have been participating in the Gulf of Mexico Program under our Special Investigations Program which is funded annually under the General Investigations account. Corps of Engineers activities impact on many of the Gulf of Mexico's resources and the activities and recommendations of the other participating Federal and State agencies have the potential to impact significantly on our programs.

Mr. MYERS. Other than attending meetings, please provide some examples of the work you are performing under this program.

General GENEGA. We have been actively involved with several issue committees such as the Coastal and Shoreline Erosion Committee for which we are the Federal Co-chair. These committees recently evaluated potential projects and studies and recommended a $4 million program for next year, with about 50 percent of this EPA funding and the rest provided as cost sharing by various states and agencies. We also provide the Federal Co-chair for the Freshwater Inflow Issue Committee. We coordinate various activities with the Program Office such as drafting of the Federal Participation Agreement and development of overall program recommendations.

GULF OF MEXICO PROGRAM

Mr. MYERS. How many Corps employees will be involved in this program in FY 96?

General GENEGA. There are sixteen individuals from either districts, divisions, or research labs that are listed as members on various committees. Some of these are not active participants, and most have only minor involvement such as attending occasional meetings or reviewing information. The Lower Mississippi Valley Division has the largest effort expecting to expend about $125,000 on salaries and travel in FY 96 and New Orleans District expecting to expend about $25,000.

INTERAGENCY WATER RESOURCES DEVELOPMENT

Mr. MYERS. How much was expended in fiscal year 1994 for Interagency Water Resources Development?

General GENEGA. We spent $898,700 for Interagency Water Resources Development in fiscal year 1994.

NATIONAL ESTUARY PROGRAM

Mr. MYER. How much do you plan to expend in fiscal year 1995 for activities related to the National Estuary Program?

General GENEGA. We anticipate spending $184,000 in fiscal year 1995. These funds cover coordination costs and limited technical transfer costs of Corps district personnel.

Mr. MYER. What element of the Corps manages this program?

General GENEGA. Corps participation in this EPA program is through our field office planning division elements.

Mr. MYER. Please give us some examples of the work you are undertaking under this program this year.

General GENEGA. The Corps is actively participating in the planning activities of the on-going National Estuary Program Management Conferences. Our participation is at the invitation of the EPA or the State Governor where the estuary is located. Corps district personnel are on the Management Committees and Scientific-Technical Advisory Committees, where they can provide the interagency State/Federal planning teams with advice on engineering aspects of Corps projects in the estuaries.

Mr. MYER. How much has EPA requested for the program in fiscal year 1996?

General GENEGA. We do not know how much EPA has requested.

COASTAL AMERICA

Mr. MYERS. Please describe the Coastal America Initiative.

General GENEGA. The Coastal America Initiative is a collaborative multi-agency partnership to address environmental problems along our Nation's coasts. The partners include the Federal agencies with principal responsibility for the stewardship of coastal resources, those with responsibilities for infrastructure development and those whose activities affect the coastal environment. The partnership operates through a Memorandum of Understanding. There are currently eleven signatory agencies: Department of Defense, Department of Army, Department of Air Force, Department of Navy, Department of Agriculture, Department of Commerce, Department of Energy, Department of Housing and Urban Development, Department of Interior, Department of Transportation, and the Environmental Protection Agency. The partnership seeks to integrate its existing capabilities and resources with state, local, and nongovernmental efforts to address specific local problems. The goal is to forge comprehensive, cost effective, implementable solutions.

Mr. MYERS. What is the Corps' role in the Coastal America Initiative?

General GENEGA. The Corps participates when it sees opportunities to appropriately leverage our resources with those of the other partners. As the specific purpose of the partnership is to implement collaborative solutions, the Corps has participated as lead agency for approximately 29 of the total 110 Coastal America projects to date. The Galilee Bird Sanctuary restoration project, located on the coast of Rhode Island, provides an illustration of such collaborative activities. It is a project to restore approximately 130 acres of salt marsh affected by dredged material disposal and the construction of transportation facilities. The Corps has been the lead agency for this project, in partnership with the Environmental Protection Agency, U.S. Fish and Wildlife Service, and the Department of Transportation. Nonfederal partners include the Rhode Island Transportation Department and Fish and Wildlife Department, the University of Rhode Island and Ducks Unlimited. The cooperative development and implementation of this project through Coastal America made it possible for the entire marsh area to be considered as a whole for the purpose of restoration.

Mr. MYERS. Why have no funds been directly requested for Coastal America.

General GENEGA. There is no specific funding authority for Coastal America and each partner agency participates in the process through appropriate use of its regularly funded authorities. In addition, the goal of the Initiative is the implementation of solutions, rather than a study or research process. To a large extent, much of the supporting work for the consensus solutions implemented by the partnership have been developed through other specific program efforts, such as the Environmental Protection Agencys National Estuary Program. Fast and efficient implementation and collaboration is more easily obtained through use of existing funding sources. For these reasons, the Corps has participated through its Section 1135 authority (Water Resources Development Act of 1986, Public Law 99-662, as amended); and Section 22 authority (Public Law 93-251, Planning Assistance to States).

ENVIRONMENTAL PROGRAMS

Mr. MYERS. Do activities like the Gulf of Mexico Program, the National Estuary Program, and the North American Waterfowl Management Plan have specific objectives?

General GENEGA. The Gulf of Mexico Program and the National Estuary Program are Environmental Protection Agency programs. The North American Waterfowl Management Plan is a Department of Interior program. Those agencies have specific objectives they hope to attain through their programs. The Corps of Engineers participates, along with other Federal agencies, on the Gulf of Mexico and National Estuary Programs when invited to do so by the EPA. The Corps has cooperated with the U.S. Fish and Wildlife Service to further the goals and objectives of the North American Waterfowl Management Plan, which is signed by the United States, Mexico and Canada.

Mr. MYERS. Will these programs ever be completed or will the continue as long as funds are available?

General GENEGA. The problems that these programs are designed to address will likely continue for a long time.

COOPERATIVE PROGRAM TO RESTORE FISH HABITAT

Mr. MYER. Please provide the Committee with some examples of projects that have been evaluated and constructed under your cooperative program to restore and create fish habitat with the National Marine Fisheries Service.

General GENEGA. Our Baltimore District, in cooperation with the National Marine Fisheries Service, restored an acre of submerged aquatic vegetation and over two acres of oyster reef using dredged material from a channel maintenance project. Our Mobile District restored one-half mile of slough for striped bass by removing a stream blockage. Our Seattle District restored two acres of intertidal estuarine habitat used by salmon. These are just examples of a number of successful restoration projects carried out under the cooperative program under existing project funds and authorities.

Mr. MYER. How much has the National Marine Fisheries Service requested for this program in fiscal year 1996?

General GENEGA. We do not know how much the National Marine Fisheries Service requested for this program in FY 1996.

DAM INVENTORY

Mr. MYERS. Has the legislation to extend the authorization for the non-Federal dam inventory program been introduced in the 104th Congress?

General GENEGA. To my knowledge, specific legislation to extend the program has not yet been introduced in the 104th Congress.

FLOOD PLAIN MANAGEMENT SERVICES

Mr. MYERS. How does assistance provided under the Flood Plain Management Services program differ from that provided under the Planning Assistance to States program?

General GENEGA. The assistance provided under the Flood Plain Management Services program is limited to issues dealing with flood plains and flood damage mitigation. For the most part, the assistance is provided for specific areas or regions within a state or on Indian lands and primarily for use by local communities and agencies. The assistance provided under the Planning Assistance to States program is much broader. It deals with the development, conservation, and utilization of any and all water and related land resources within a state's boundaries. Much of this assistance supports state-wide or regional planning. The small portion of planning assistance that deals with floods or flood plains is carefully coordinated to insure no duplication of effort by either program.

Mr. MYERS. Is cost sharing required under the Flood Plain Management Services program?

General GENEGA. There is no charge for Flood Plain Management Services provided to states, regional or local governments, Indian tribes, or other non-Federal public agencies. However, we are authorized to recover the costs of services provided to other Federal agencies and private persons. For these customers, we try to recover 100% of the costs rather than cost sharing.

Mr. MYERS. In fiscal year 1994, how many requests for information could you not answer because of insufficient funds? Will you be able to accommodate all requests in fiscal year 1995?

General GENEGA. Requests for Flood Plain Management Services vary from technical services that take only a few hours to special studies that can take over a year to provide. For the past several years we have tried to constrain requests so that they are more in line with actual funding and capability. In fiscal year 1994 we were unable to respond to about 8,000 requests for technical services and around 150 requests for special studies. Because of new and significantly increased demand, we probably will be unable to respond to an even greater number of requests in fiscal year 1995.

STREAM GAGING PRECIPITATION STUDIES

Mr. MYERS: The amounts requested for both the Stream Gaging and Precipitation Studies programs are decreases compared with fiscal year 1995. Is this related to the proposal to reduce the Corps' overall role in flood control projects?

General GENEGA: No, the Fiscal Year 1995 program was extraordinarily large for the following reasons:

1. The 1993 Mississippi River Basin flood caused serious damages to many stream gages. The fiscal year 1995 Stream Gaging program included monies that were reprogrammed in fiscal year 1994 to repair damages and replace gages as necessary.

2. The Precipitation Studies are hydrometeorological studies conducted by the National Weather Service for development of probable maximum precipitation and are used in the design and safety analysis of dams. During fiscal year 1995 the Corps' program for this purpose called for $500,000 which included funding for development of probable maximum precipitation for design of the Santa Ana and American Rivers dams. It was found most cost effective to expand the above studies to cover the entire State of California while two major drainage areas were under study. For this reason the Corps requested and received an additional funding of $150,000 for fiscal year 1995.

SCIENTIFIC AND TECHNICAL INFORMATION CENTERS

Mr. MYERS. When other Federal agencies, state governments, or the private sector request information under the Scientific and Technical Information Centers program, are they charged a fee for the service provided?

General GENEGA. The Technical Information Centers acquire, evaluate, and disseminate highly specialized scientific and technical information in specific areas of Civil Works activities: Soil Mechanics, Concrete Technology, Coastal Engineering, Hydraulic Engineering, and Cold Regions Engineering. This resource is available to Corps of Engineer Offices at no cost. Corps personnel are the primary users since the Centers serve as a repository of literature and data involving virtually exclusively Corps-unique missions such as inland waterways, large mass horizontal dams or dredging, etc. Other Federal agencies are infrequent requestors because of the Corps-unique mission. Inquiries from state agencies and the private sector are even less frequent and are usually precipitated as a result of a collaborative effort on a cost sharing project in a Corps District or a contract with a District. In these instances, documents are provided at no cost. Requests for reports are referred to NTIS from which documents may be obtained at minimal cost. No fees are charged for routine letter, telephone, or in-person inquires.

Mr. MYERS. Does the Department of Defense contribute to the operation of the centers? If so, what is its request for fiscal year 1996?

General GENEGA. The operation of the Information Analysis Centers is supported by Civil Works funding, General Investigations Appropriation, only. The Department of Defense does not contribute to center operations with the exception that research results acquired as part of military RDT&E appropriations or military reimbursable studies may be archived at the center if there is the potential of contribution to the Civil Works mission.

Mr. MYERS. What percent of the work under the Scientific and Technical Information Centers program is directly related to the Corps' Civil Works mission?

General GENEGA. Because the Centers operate in specific technical areas unique to the Civil Works mission, and the primary users are Corps District and Division offices, the percent of their work related to the Corps' Civil Works mission is 100%.

COASTAL FIELD DATA COLLECTION

Mr. MYERS: The budget proposes that the Corps phase out its involvement in shore protection projects. Why isn't there a corresponding reduction in the Coastal Field Data Collection program?

General GENEGA: Shore protection engineering, whether funded by the Congress, the States, or locals depend on adequate data taken years in advance. Coastal engineering suffers from a lack of long-term data. Statistical information depends on a continuous record database. A broken record (data with missing period(s)) severely downgrades data already collected. The Coastal Field Data Collection Program is lean. State governments currently cost-share many wave gages, but are not prepared at this time to financially pick up the whole program. Gages in the Coastal Field Data Collection Program also supports coastal navigation which is not being phased out.

ENVIRONMENTAL DATA STUDY PROGRAM

Mr. MYERS. Please provide for the record some specific examples of work accomplished under the Environmental Data Studies program.

General GENEGA. Recent uses of Environmental Data Studies Funds illustrate the diversity and importance of the account:

a. Production of Geographic Information System (GIS) environmental databases for sediment chemistry in universal format for use by Corps, State and other Federal agencies participating in the National Estuary Program;

b. Management of the National Archeological Data Base/Corps of Engineers Automation Program Pilot Test linking USACE Commands with the University of Arkansas and National Park Service;

c. Development and field testing of a CD-ROM cultural resource data base .

d. Staff training and field testing of computerized fish and wildlife information systems developed by two different State Resource agencies.

Mr. MYERS. Please provide for the record a list of the reporting requirements that are met through this program.

General GENEGA. The Environmental Data Studies Fund was established for the purpose to support and encourage the sharing of environmental information and data, facilitate the locating of other available and pertinent environmental information and train field personnel in its access and use. The program is not designed to meet any reporting requirements.

REMOTE SENSING

Mr. MYERS: What remote sensing resources are available for use by the Corps of Engineers?

General GENEGA: The Corps of Engineers has access to data from commercial satellites such as Landsat, SPOT, and RadarSAT as well as national assets (Classified). There are a number of agency-wide contracts for purchasing satellite data within the Department of Defense, the Army, and the Corps. The Corps has access to aerial photography through the U.S. Geological Survey's National Aerial Photography Program (NAPP) and also contracts for collection and processing of aerial photography. An important remote sensing resource within the Corps of Engineers is technical expertise in the use of remotely sensed data. Each research laboratory has expertise with certain themes of remotely sensed data. For example, the Construction Engineering and Research Laboratory coordinates with the University of Illinois to analyze military installations. The Topographic Engineering Center provides terrain analysis for the tactical army, including ground truth and rigorous geometric analysis for hyperspectral and interfermometric synthetic aperture radar technologies. The Waterways Experiment Station has expertise in analyzing coastal, earthquake, and water resource information. The Remote Sensing and Geographic Information System Center at the Cold Regions Research and Engineering Laboratory serves as the central point of contact for remote sensing in support of the Corps' Civil Works program.

FLOOD DAMAGE DATA COLLECTION

Mr. MYERS. For fiscal year 1996, you propose to initiate a new Flood Damage Data Program. In the justification for this program, you state that there is no funding mechanism to report and record accurately damages that result from flooding. Doesen't the annual flood damage report you provide to Congress each year include that information?

Gen. GENEGA. The primary function of the annual flood report is to provide Congress with information on damages prevented by Corps projects using existing data. The damages reported in the annual flood report are provided by the National Weather Service. The data collection proposed here will improve the quality of these estimates. The real benefits of the program, however, come from collecting information about the characteristics of specific events so that we can improve our understanding of key relationships which will lead to improved estimates of damages/benefits from study thru operation of projects.

AUTOMATED INFORMATION SYSTEMS

Mr. MYERS. You state that the amounts requested for Automated Information Systems Support represents the Civil Works proportional share of that program. What other organizations contribute to this program?

General GENEGA. Funding requests for automated information systems support have been included under the General Investigations and General Expenses appropriation requests for the first time in FY 96. Previously, these items had been funded via our centralized accounts program. For those items which principally support our Civil Works mission we are requesting funding exclusively with Civil Works resources; for those which are also used to meet our miltary programs and support for others mission we are either requesting Operations and Maintenance, Army (OMA) funding or will fund with fees charged to military programs and support for others system users, in addition to the requested Civil Works funding.

Mr. MYERS. How much will they contribute to the overall program in fiscal year 1996?

General GENEGA. The Corps anticipates using approximately $3.8 million of OMA and other non-Civil Works funds some of which will be collected as user fees.

CAGE and GCASE

Mr. MYERS: How is CAGE different from GCASE?

General GENEGA: CAGE (Computer Applications for Geotechnical Engineering) provides centralized development, evaluation, and distribution of computer programs and other software packages for geotechnical engineering. Current development and technology transfer activities include automated instrumentation data acquisition for dams, grouting data base, instrumentation data manipulation and display, foundation design, CADD interface, and design tool development. GCASE (Geotechnical Aspects of Computer Aided Structural Engineering, is a system which provides computer programs for designing projects. Current tasks include stability analysis, finite element analyses, CADD, U-frame structures, earth pressures pile foundations, soil-structural interaction, and arch dams. Both systems are used during the design and do not duplicate tasks.

NUMERICAL MODELS

Mr. MYER. You state that your numerical models provide annual cost savings of over $50,000,000. How was that figure derived?

General GENEGA. The cost savings are based on savings achieved through the application of these numerical models to Corps District projects. Savings are realized through reduced annual operations and maintenance (O&M) costs, lower project design and construction costs, and reductions in manpower. An example of the cost savings from using numerical models is an application at Red River Lock and Dam 5 and 6 projects. At these projects previous investigations had shown a requirement for insulation of newly placed concrete to prevent thermal cracking. Results using Advanced Visco-Elastic Constitutive Model (AVCM) indicated insulation was only required on a limited number of monoliths. Because of the change in required insulation, the construction contractor estimated total cost savings of $12,000,000.

NATIONAL SPATIAL DATA INFRASTRUCTURE

Mr. MYERS: Could you briefly explain exactly what the National Spatial Data Infrastructure is?

General GENEGA: It is the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve utilization of geospatial data (information typically found on a map). This infrastructure is throughout Federal, State, local, tribal, private and academic institutions, however, it is uncoordinated and inefficient. For example, multiple agencies are not aware that they are each collecting the same data for the same geographic area. Agencies and their contractors collect the data using surveying and remote sensing equipment and they process and analyze the data with a variety of computer hardware, software, and telecommunications equipment yet these technologies are not integrated to maximize efficiency. Computer programmers, scientists, engineers, surveyors, and database administrators around the country are developing geospatial data bases yet they are not documenting this data nor are they making it available to the public. The NSDI is a coordinated Federal effort to have agencies produce data that can be used by everyone.

Mr. MYERS: What other agencies have requested funds in fiscal year 1996 for this activity?

General GENEGA: Agencies have approached the implementation of the NSDI in a variety of ways. The U.S. Geological Survey has requested $3,500,000 for NSDI efforts, as they did last year. Other Department of Interior bureaus are reducing funding in other areas in order to support the NSDI, but these items may not be labeled as NSDI in their budgets. Some agencies already have programs in place that have goals similar to those of the NSDI and have opted to use those funds to comply with EO 12906. For example, the Defense Mapping Agency's Global Geographic Information Services Program is their vision of an NSDI. The Library of Congress plans to use money in its National Digital Library Program to scan thousands of maps and make them available to the public via electronic means. The National Resources Conservation Service (formally the Soils Conservation Service) has asked for an increase in funds within several existing programs so that they can create NSDI Framework data, accelerate their creation of a national soils data base to federal standards, and host this data base on behalf of the federal government. The Corps approach will allow us to comply with EO 12906 in a corporate and cost efficient manner and will posture us to gain the full benefits of the NSDI.

Mr. MYERS: Does the fiscal year 1996 budget request include any funds for this effort within amounts requested for individual projects?

General GENEGA: No. Due to the timing of the issuance of the Executive Order on the National Spatial Data Infrastructure (NSDI), project specific requirements could not be identified by our field offices during our normal budget process. Therefore, $1,750,000 of the $2,050,000 requested will be provided to our field offices for use in organizing geospatial data from individual projects so that it can contribute to the NSDI. Beginning in fiscal year 1997, such efforts on individual projects will be included in the mapping portions of project budgets.

Mr. MYERS: You state that you spend about $175,000,000 annually for the collection and/or purchase of geospatial data. Can you provide a breakdown of that figure?

General GENEGA: In responding to OMB Bulletin No. 93-14, which was a data call to determine this amount for all Federal agencies, we collected the breakdown by appropriation types. Results were as follows: General Investigations $34,000,000, Construction General $15,000,000, Operations and Maintenance $90,000,000, Flood Control and Coastal Emergencies $2,000,000, Regulatory Program $10,000,000, Flood Control Mississippi River and Tributaries $16,000,000, Revolving Fund $2,000,000, Other $6,000,000. This included observations such as: soil borings, soils and vegetation types, precipitation, stream gaging, stage and discharge measurements, water velocity and temperature; maps such as: hydrographic and topographic, land use, flood plains, habit, wetland inventories; positions such as: geodetic and control surveys, global positioning system surveys, boundary markers; and imagery such as: aerial photography, orthophotos, satellite imagery, and side scan sonar.

RESEARCH AND DEVELOPMENT

Mr. MYERS. The budget request proposes a reduced role for the Corps of Engineers in the areas of flood control and shore protection. Are those policy initiatives reflected in any way in your research and development program?

General GENEGA. The policy initiatives do not change research and development (R&D) needs. R&D required to support present missions of the Corps in navigation, multi-state flood control, and environmental protection require the same facilities and expertise as needed to address local-flood control and shore-protection problems. In addition many Corps' projects involve complex interrelated problems. For example, erosion on a coastline may be the source of sand that clogs an adjacent navigation channel or the navigation project itself may be the cause of the erosion. In these cases shore protection and navigation are interrelated and an integrated solution requires R&D on the complete problem. The only facilities and experts in the U.S. that can address most interrelated problems in flood control, shore protection, navigation, and water-resource environmental problems are located at the 685-acre U.S. Army Engineer Waterways Experiment Station (WES) in Vicksburg, Mississippi. R&D is a National responsibility, and it is not feasible to subdivide among the 50 states the responsibility for R&D on portions of complex interrelated water-resource problems nor to reproduce the unique facilities and expertise at WES. Since the Federal government provides considerable funding during disasters, it also is in the National interest that R&D be performed in the Corps to ensure flood-control projects in single states, hurricane flood-protection projects, and shore-protection projects are safe, effective, affordable, and environmentally conscious.

Mr. MYERS. You state that the Corps spends very little on R&D compared to other Federal agencies and private industry. Do you have the data to back up that statement?

General GENEGA. Yes, we do. The Corps of Engineers Civil Works R&D Budget is approximately $57 million which supports a total Corps program of $4.02 billion. The Corps R&D investment is on the order of 1.4% as compared to electronic industry investment which is on the order of 10%.

For a comparison to other agencies and private industry, consider the Department of Energy and NASA. DOE's total R&D budget is approximately $7 B, with Sandia National Laboratory alone having a budget of $1 billion. Two other large DOE labs - Los Alamos and Lawrence Livermore, each have budgets of $0.8 billion. The total NASA R&D budget was about $14 billion.

The table below is from" Inside R&D" newsletter, and shows the R&D expenditures of 10 of the top American companies:

General Motors	$5.9 B
IBM	5.1 B
Ford	4.3 B
AT&T	2.9 B
Boeing	1.8 B
Digital Equipment	1.8 B
Hewlett Packard	1.6 B
Eastman Kodak	1.6 B
General Electric	1.4 B
Motorola	1.3 B

The $57 million Civil Works R&D budget of the Corps of Engineers is clearly small compared to these other R&D expenditures.

COASTAL ENGINEERING

Mr. MYERS. How does the wave data collected under the Coastal Engineering research areas of the R&D program differ from that collected under the Coastal Field Data Collection program?

General GENEGA. The Coastal Field Data Collection Program (FDCP) collects long-term wave data from strategically located sites around the U.S. to establish the wave climatology critically needed to plan, design, construct, and operate coastal projects. Wave data are the key parameter needed for coastal project planning and design. The data must be measured for a sufficiently long time that the statistics encompass the wave conditions (i.e., rare storm events) to which the project has a risk of being subjected. The reliability and accuracy of the measured wave statistics increases significantly as the measurement period increases. The FDCP collects the required data on a regional scale and statistically enhances and extends the data base so that it can be used for individual Corps projects. In contrast, the coastal engineering research areas of the R&D program collect limited special-purpose wave data to improve fundamental understanding of the physics of waves that is needed to advance coastal-engineering technology. Specialized measurements are needed to test wave theories, verify coastal numerical wave models, understand wave interactions with structures, and develop predictive models of wave/current interaction and sediment transport by waves. Therefore, the FDCP continuously collects key wave data required for project planning and design. The coastal engineering R&D program collects critical data needed to advance state-of-the-art technology in coastal engineering.

LONGSHORE SEDIMENT TRANSPORT

Mr. MYERS. Please explain the need for a large-scale laboratory facility to develop robust longshore sediment transport relationships?

General GENEGA. There are at least three categories of Corps field projects that would benefit directly from a better understanding of longshore sediment transport made possible through the use of this large-scale laboratory facility. They include: (1) evolution of ocean inlets and harbor entrances and their impact on our ability to maintain navigable waterways, (2) impacts of coastal navigation structures on adjacent beaches, and (3) durability of shore protection projects. Methods for predicting longshore sediment transport are believed to have large errors. Field and laboratory data acquisition are complementary research activities in the effort to develop more accurate predictors of longshore transport. A single, adequately instrumented, field data acquisition experiment is extremely expensive, and costs are prohibitive for studying a wide range of beach, sediment, and wave conditions. The large-scale facility resulting from modification of an existing facility provides a means for affordably studying longshore transport processes for a much wider range of beach and sediment characteristics, at near prototype scales, in a controlled environment. The controlled, albeit simplified, laboratory environment also avoids some complexities of the real world which aids in understanding aspects of the underlying physics of the transport process

Mr. MYERS. What will that facility cost?

General GENEGA. This is a modification of an existing facility to add circulation and sediment handling equipment. The total coast of the modification is $350,000.

Mr. MYERS. What is the schedule for construction of the facility?

General GENEGA. Following is the construction schedule:

Spring 1995 - construct concrete beach
Summer 1995 - design and fabricate current circulation system
Fall 1995/Winter 1996 - hydrodynamic testing of facility
Spring/Summer 1996 - design and fabrication of sediment handling system
Winter 1997 - sediment handling system testing
Summer 1997 - operational facility; initiation of full test series

SEDIMENT TRANSPORT

Mr. MYERS. Please describe the interagency experiment on sediment transport that you have been planning.

General GENEGA. The SANDYDUCK nearshore field experiment is scheduled for FY97 and is cooperatively sponsored by the U.S. Army Corps of Engineers, the Office of Naval Research (ONR), the U.S. Geological Survey, and the Naval Research Laboratory. The overall objective of SANDYDUCK is to advance our fundamental understanding of the movement of sediment in the nearshore zone through an integrated program of state-of-the-art field measurements and numerical modeling. Sediment transport affects maintenance of navigation projects, shoreline erosion, and coastal flooding. The majority of funding for the experiment is being provided by ONR. ONR's interest relates to the Navy's warfighting mission in the littoral zone. The Corps is taking advantage of this unique opportunity to make complementary measurements to advance understanding of sediment transport needed to support Corps missions in navigation, flood control, and shore protection.

The scientific and engineering objectives of SANDYDUCK were first developed in 1991 and a successful pilot experiment called DUCK94 was conducted during 1994 at the Field Research Facility of the U.S. Army Engineer Waterways Experiment Station. This facility is located on the Atlantic Ocean in Duck, NC. Over 100 people from 15 universities, 5 agencies, and 2 companies conducted 30 experiments during DUCK94. It is anticipated that more groups will be participating in SANDYDUCK.

This sequence of experiments is an excellent example of inter-agency pooling of funding and resources to address a difficult and complex problem that affects everything from civil works missions of the Corps to warfighting missions of the Navy.

ENVIRONMENTAL QUALITY

. Mr. MYERS. What are the customer service plans you will be developing under the Environmental Quality research area?

General GENEGA. A methodology will be developed and field tested that will allow customer service plans to be developed at all CE projects. This technology will be based on proven marketing and evaluation techniques from the business sector and will provide the ability for tailoring customer service management practices to the local-user market. Use of this technology will increase cost effectiveness of recreation and natural resource management practices.

Mr. MYERS. Have you been able to determine the effects of recreation user fee programs?

General GENEGA. Data is currently being collected in the Corps Districts and Divisions to quantify the impact of recreation user fees on utilization at Corps project sites. The data collection will be completed in FY95 and data analysis will be initiated in FY96.

PROGRAM AND PROJECT MANAGEMENT

Mr. MYERS. Of the $1,000,000 requested for Water Resources Planning R&D, how much will be used for the Program and Project management techniques research area?

General GENEGA. The amount programmed for Program and Project Management Techniques Research for fiscal year 1996 is $150,000.

Mr. MYERS. If Project Management has already been implemented throughout the Corps, why is this work needed?

General GENEGA. Although Program and Project Management has been implemented throughout the Corps and is performing well, the state-of-the-art is constantly changing and we need to keep pace to provide the best possible service to our customers. The efforts of the R&D program will serve this goal by matching the best improvements with the needs of the Corps.

Mr. MYERS. Won't the effectiveness of Project Management be determined by your ability to complete projects on time and within the budget?

General GENEGA. The effectiveness of Project Management (and the Corps) is indeed a function of our ability to deliver quality projects on time and within budget. Improvement of that ability through the proper implementation of state-of-the-art project management planning, execution, and control techniques is a prime focus of the R&D program. New techniques and their applications will be researched to determine their potential utility to the Corps, and training programs will be developed for those techniques with the greatest potential for improving the effectiveness of program and project management in the Corps.

CONSTRUCTION, OPERATION AND MAINTENANCE

Mr. MYERS. What projects will be undertaken in fiscal year 1996 with the funds requested for the Construction, Operations and Maintenance research area?

General GENEGA. The Improvement of Operations and Management Techniques (IOMT) Program, under the Construction, Operations and Maintenance Research Area, will have three principal thrust areas. Benefits to be derived from these thrust areas include innovative, reliable, replicable methods by which Operations and Maintenance (O&M) management can gauge the efficiency and effectiveness of their programs, including service quality and customer satisfaction. The new methodologies and decision assistance tools developed through this research will be used to better focus scarce personnel and fiscal resources to meet the Corps' infrastructure operations and maintenance needs. The first thrust area will conduct research needed to support the Government Performance and Results Act of 1993 in conjunction with the National Performance Review as implemented in the O&M community. Specifically, the emphasis will be on assisting the O&M community to design, implement, and evaluate meaningful performance measurement systems. This assistance will include conducting workshops and guidance training sessions as the performance measurement systems are developed, tested and critiqued. The second research thrust area will provide decision assistance tools or methodologies to the O&M project and program managers. The emphasis in this thrust area will be on developing and implementing through workshop training sessions better tools for managing budget execution of current year operations. The final thrust area will develop improved guidance to the Corps' cost sharing partners through improved estimates for post-construction maintenance and improved O&M manuals to be provided to local sponsors. These improvements for our cost sharing partners will provide them with better methods of determining realistic budget outlays to support their portion of the cost to maintain our shared projects.

CPAR

Mr. MYERS. Please provide brief descriptions of the projects selected for the CPAR program in fiscal year 1995 indicating how they related to the Corps' civil works mission.

General GENEGA. Attached is a brief description of the selected projects.

(1) Unique Polymeric Fibers and Fiber Delivery Systems for the Economic Preparation of High Fiber Concrete with Superior Physical Properties:

(a) A three-year project will evaluate, demonstrate, and establish commercial feasibility of a low-cost polyolefin fiber and fiber delivery system consisting of uniquely packaged fibers that allow easy and uniform distribution of fibers in the concrete composite matrix. Laboratory evaluation will be performed to determine performance parameters and the chemical, mechanical, and surface properties of the fibers. Large-scale demonstration placements will be used to determine the effectiveness of the delivery system, the workability of the concrete, and the in-place physical properties of the concrete. The fibers and delivery system are expected to reduce the quantity of concrete required by 25 to 50 percent compared to conventional fiber-reinforced concrete, provide concrete with higher strength and improved resistance to impact and chemical attack, and provide for thinner pavement overlays which can be fabricated 20 to 50 percent faster.

(b) The Corps has more than 600 concrete hydraulic structures at its Civil Works projects which require periodic maintenance, repair, and rehabilitation. In addition, these Civil Works projects contain service and recreation roads, sidewalks, etc., that will benefit from this technology. Dramatic savings potential exists for the concrete construction efforts at these projects.

(2) Long-Life, Corrosion-Resistant, Composite Pipes for Penstock, Flood-Control and Offshore Pipeline Applications:

(a) This effort will develop and demonstrate fiber-reinforced composite pipe which can be used as-is or slip-lined and grouted into existing large-diameter pipes to provide a cost-effective, corrosion-resistant alternative for large-diameter steel pipes used by the hydroelectric power, petroleum, and petrochemical industries. Laboratory evaluation will be conducted to determine impact, fatigue, and degradation resistance properties of prototype pipe designs relative to standards for environments encountered in penstocks and process piping applications. Field testing of the most promising prototypes will be conducted to verify performance and ease of installation. The total life-cycle cost savings through utilization of the corrosion-resistant pipes by the target industries is expected to be $0.5-$1 billion annually.

(b) This technology will be used in the repair and rehabilitation of Corps dams and hydropower facilities. Potential savings from the rehabilitation of penstocks using slip-lined composite pipe is $5,000 to $25,000 per ft.

(3) A Time Domain Reflectometry (TDR) Pulser for Monitoring Groundwater Levels with Piezometers:

(a) This project will develop, demonstrate, and commercialize a rugged, self-calibrating field instrument for remotely monitoring groundwater levels/piezometric pressures. A conceptual design of the pulser will be developed, taking advantage of the unique geometry of pulsing a coaxial cable and analyzing the reflected signature. Critical design parameters applicable to field use and the optimization and miniaturizations of components will be determined. A prototype TDR instrument package will be developed and evaluated. The TDR instrument is expected to reduce water level measurement installation and maintenance costs by at least 50 percent with an initial cost 50 percent less than conventional level measurement transducers.

(b) The Corps uses piezometers to monitor groundwater elevations and pressures at project sites distributed across the United States.

(4) Development of a Portable Innovative Contaminated Sediment Dredge:

(a) A research effort to develop and demonstrate a portable dredge capable of accurately removing and transferring subaqueous material at near in-situ densities while minimizing resuspension of contaminated solids. A prototype pump and clamshell system will be developed and the design optimized. A GPS system will be incorporated for accurate dredge positioning. The new dredge will permit precision dredging of contaminated and noncontaminated sediments around docks, wharves, marinas, and other restricted areas, and is expected to reduce the cost of removing contaminated material by $15 to $50 per yard.

(b) The Corps' Civil Works mission includes maintenance of 25,000 miles of waterways. It has been conservatively estimated that over 15 million cubic yards of contaminated material are dredged each year.

(5) A Field Test/Demonstration of a Multi-Segment Dewatering System for Accreting Beach Sand in a High Wave Energy Environment:

(a) A project to demonstrate the performance of a multisegment beach dewatering system and develop quantitative guidance for constructing and operating beach dewatering systems. The dewatering system, composed of perforated pipes buried in the beach swash zone and a pumping system, will be installed at Siasconset, MA. Innovative continuous trenching equipment for low-cost installation will be evaluated. Adjacent beach erosion and accretion will be quantified to correlate sediment accretion with system layout, pumping rates and duration, and to evaluate environmental conditions such as wave climate, water levels, and water table. The initial cost of dewatering is 25 to 35 percent of the cost of beach fill and annual costs may be reduced by a factor of six.

(b) Beach dewatering supports the Corps' Civil Works mission to maintain waterways and shorelines. Beach dewatering offers the Corps a viable, cost-effective approach to shore protection.

(6) Development and Demonstration of Recycled Plastic Composite Railroad Ties:

(a) This research project will develop, demonstrate, and result in commercialization of high-performance polymer composite railroad ties made from composite reinforced recycled plastics for light and heavy rail applications. Performance requirements for loadings, installation and fastening considerations, and cost targets for ties will be developed and candidate plastic mixtures evaluated. Prototype ties will be designed, fabricated, and test-loaded in the laboratory, including testing of rail and tie assemblies. Design guidance and materials standards for the new ties and commercial manufacturing capability will be developed. The new ties will provide a more durable, longer-lasting track assembly with superior economic and environmental benefits.

(b) Anticipated heavy rail applications will primarily benefit the railroad construction industry and for cost effective repair and replacement of the extensive rail infrastructure. Composite railroad ties will have economical, life expectancy, and environmental benefits as compared to traditional treated-hardwood ties. Anticipated Civil Works benefits will be in light rail applications at Corps navigation facilities and as timber replacements in piers, bulkheads, and stoplogs for disposal site weirs.

(7) A New Building System Based on Foamed Concrete Cast Between Stay-in-Place Forms of Fiberglass-Reinforced Cement Board:

(a) This effort will develop, test, demonstrate, and commercialize a new building system composed of stay-in-place forms made of fiberglass-reinforced board erected on a specially designed concrete foundation and filled with foamed concrete. Components and materials optimization and performance envelopes will be determined for a range of placement conditions, and designs will be developed. The new building system is expected to reduce materials cost by 20 to 30 percent over conventional wood/wallboard and masonry block construction and provide labor productivity gains of 30 to 50 percent in commercial, residential, and civil construction.

(b) This project will provide the Corps with a new technology for building safer, high-quality structures with lower initial costs and reduced operation and maintenance costs. Buildings are inherently required at most Civil Works project sites for offices, maintenance and storage, protection of operating equipment, etc.

Mr. MYERS. Of the amount requested, how much is required to continue ongoing projects?

General GENEGA. None. All CPAR projects are funded upon approval to initiate the project. This is necessary to encourage industry partners to enter into a cost-sharing agreement with the Corps. Most partners insist on Corps fiscal commitment and that the resources are available prior to signing of a legally binding agreement that commits the firm's resources to collaborative research effort.

Mr. MYERS. If the research being conducted under the CPAR program is truly beneficial to the construction industry, why doesn't industry undertake the research on its own?

General GENEGA. Some risks are almost always involved in research, development, and commercialization of any new technology. If the costs of the project can be shared by the benefiting parties, the risk is more acceptable. The construction industry, predominately composed of small private companies, historically conduct little to no research. The construction industry typically invests less than 0.5 percent of its sales in research. Our experience has shown that most of the proposed CPAR projects that are not approved for cost-sharing under the CPAR program are not pursued by the proposing party and do not come to fruition. This may be due to a lack of resources (technical and financial) of the proposing party, or the risk may be perceived as too high for one party. This collaborative research program not only reduces the risks and cost to government and industry, it also stimulates greater interest in research by the industry when they feel that the end product of the research will satisfy a government need and thus realize an immediate market.

Mr. MYERS. Why should the Federal Government subsidize this research?

General GENEGA. It is extremely important to the Corps to enhance construction productivity. The Corps is possibly involved in more construction projects than any other Federal entity. The optimum strategy is to enhance productivity through cooperative research. The overall R&D investment by the U.S. construction community, reflecting both public- and private-sector commitments, is approximately one-seventh of the U.S. average investment in R&D by other mature industries. The U.S. construction industry, while large in dollar volume, is highly fragmented and consists mostly of small- and medium-sized firms. One consequence of this fragmentation is the fiscal inability of individual firms to conduct the research and development necessary to create innovative construction-related products. As a result, the U.S. construction industry has experienced a shift in technical leadership to other nations, declines in productivity, and losses of market share in the U.S. and abroad.

The CPAR program is one of the few programs structured for the advancement and commercialization of innovative industry concepts and technologies that will improve U.S. construction industry productivity. It is highly acclaimed by the construction industry. The Corps has signed CPAR agreements which have included over 150 industry participants in 35 states. The potential investment returns of the CPAR Program are enormous and far reaching. Products produced by the combined efforts of the Corps and industry participants are manufactured in the U.S. and create new jobs; improvements in construction productivity lead to decreased construction costs, increase international competitiveness of U.S. companies, and stimulate increased construction and the national economy.

The Federal government is the largest single buyer of construction services and will directly benefit from this improved construction productivity and competitiveness and will rapidly recover its investment in this program. Equally important, the industry partners have borne 60 percent of the total costs of the collaborative research efforts to date. The need for significant construction efforts to rebuild America's infrastructure is well documented, but unaffordable with today's construction technology and costs. The CPAR Program represents an innovative, creative, and optimal investment strategy in helping to solve this challenge.

GLOBAL WARMING

Mr. MYERS. Under the Economic Impacts of the Global Warming program, you state that you will perform economic impact analyses of alternative warming scenarios. With the degree of global warming that may occur in the future being so uncertain, what is the value of the economic analyses?

General GENEGA. The analyses are being conducted at a regional and river basin level and will provide a basis for the Corps to improve its planning and operations procedures, extending risk analysis to encompass possible changes in global climate. In addition, the work undertaken to date has contributed directly to the development of analytical procedures used by the United Nations' Intergovernmental Panel on Climate Change.

EVALUATION OF ENVIRONMENTAL INVESTMENTS

Mr. MYERS. Will fiscal year 1996 be the last year of the Evaluation of Environmental Investments Research Program?

General GENEGA. All of the key areas of research for this program are currently scheduled to be completed in fiscal year 1996. Technology transfer and distribution of research results and user manuals may extend into fiscal year 1997.

Mr. MYERS. At the end of this program, will the Corps have the ability to quantify environmental benefits?

General GENEGA. Yes, but not in a common measure such as dollars. At the end of this program we will have improved techniques for measuring environmental outputs and a framework for their evaluation. Neither the state-of-the-art of ecological modeling nor of non-market valuation permit the measurement of complex ecological system in a singular metric, nor the conversion of all such measures to monetary values. The emphasis of the EEIRP is: 1) to develop and demonstrate the capability of existing ecological models to quantify environmental outputs; 2) to develop and demonstrate improved techniques for communicating these environmental output measurements to decision makers and the general public; and 3) to develop and demonstrate an analytical framework (based on cost effectiveness and incremental analyses) under which more rational and supportable decisions can be made as to the benefits of environmental projects and programs.

ZEBRA MUSSELS

Mr. MYERS. What other agencies of the Federal Government are involved in zebra mussel research?

General GENEGA. Under the authority of the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (Public Law 101-646), the Aquatic Nuisance Species Task Force was created. Agencies included are NOAA and USF&WS (Co-Chairs), USDA, US State Department, US Coast Guard, EPA, and the Corps Zebra mussel research is closely coordinated among Federal agencies. NOAA and USF&WS are responsible for conducting research on the biology and ecology of zebra mussels in the Great Lakes and inland waterways of the U.S., respectively. The EPA has the responsibility to conduct research on contaminant uptake by zebra mussels and the potential impact. The Corps is the only Federal agency directed under the ACT to control the impact of zebra mussels on public facilities.

Mr. MYERS. How much has been requested in fiscal year 1996 for all agencies involved in zebra mussel research?

General GENEGA. Approximately $4 million was requested for fiscal year 1996 by Federal agencies for zebra mussel research.

Mr. MYERS. Have zebra mussels become a serious problem at any Corps-owned facility?

General GENEGA. Zebra mussels were first established in the Great Lakes and have caused shut down of water supplies for municipalities and power plants The Black Rock Lock, Buffalo, NY is the first Corps facility to be infested with zebra mussels. They have caused increased corrosion and interfere with closure of lock gates. At Melvin Price Locks and Dam near St. Louis, MO, zebra mussels have clogged pressure sensors which control filling of the lock chamber. Frequent maintenance and physical removal is required at both of these facilities.

Zebra mussels are now established in the Mississippi, Ohio, Illinois, Tennessee, and the Arkansas Rivers. All Corps facilities which draw raw water from these rivers, must apply control methods to prevent serious problems caused by zebra mussels. Results of the Corps' Zebra Mussel Research Program include valuable technology to prevent shut downs and ensure continued operations. It is estimated that without new technologies it would cost each facility $250,000 to $500,000 annually to manage the zebra mussel problem. There are hundreds of public facilities that reside in the area of infestation and hundreds more which reside in areas susceptible to zebra mussel establishment. Current research is developing new technology to prevent the establishment of zebra mussels and reduce the cost of managing the problem at public facilities.

WETLANDS RESEARCH

Mr. MYERS. The Characterization and Restoration of Wetlands Research program is a follow-on to the Wetlands Research Program. Has the Corps ever undertaken a research program that didn't have a follow-on program?

General GENEGA. Prior wetlands research developed techniques for delineating wetlands boundaries based on a scientific understanding of what constituted a wetland This research resulted in the Corps of Engineers' Wetland Delineation Manual which is presently used nationally to regulate wetlands. Very successful techniques for restoration have been demonstrated and this information is being transferred to the Districts and other Federal and State agencies.

The follow-on wetlands program will concentrate on defining specific wetland functions and values at the ecosystem level. Solving problems at a watershed or floodplain level require an understanding of wetlands and its surrounding landscape at a larger scale than previous studies. The results of this research will be widely applicable to the regulatory program, in development and maintenance of Federal water resources projects and in implementing new cost-sharing wetlands and other aquatic habitat creation project authorities.

The Corps has completed a number of research programs without needed follow-on programs. They include the following with the time of completion indicated.

Program Title	Completion Date
Flood Control Hydraulics	FY88
Cost Shared Hydrologic Analysis	FY90
Manpower Planning and Effectivness	FY91
Wastewater Management	FY85
Water Supply and Conservation	FY87
Energy	FY87
Construction, Operations, and Maintenance Management	FY90
Environmental and Water Quality Operational Studies	FY85
River Ice Management	FY88

GEOGRAPHIC INFORMATION SYSTEM

Mr. MYERS: In the justification for the Geographic Information Systems research program, you state that there has been an increase in environmental and regulatory requirements on Corps projects. What are those new requirements?

General GENEGA: There are over 45 pieces of legislation that the Corps of Engineers projects must comply with. It is not new requirements as much as the administration's emphasis on legislation that applies to environmental and ecological restoration, such as the Clean Water Act. The Corps anticipates continued growth in its restoration mission and recognizes that compliance with the applicable legislation will require more data and greater analysis. The GIS Research Program would allow us to develop timely and cost effective solutions to meeting these requirements , especially in light of fiscal and manpower downsizing in the Corps, which requires that we do more with less.

CONTINUING AUTHORITIES PROGRAMS
PROJECTS ADDED IN THE FY 95 APPROPRIATIONS ACT

Mr. MYERS. Are you proceeding with the projects under the various Continuing Authorities Programs that are listed in the conference report accompanying the FY 1995 Energy and Water Development Appropriations Act? Please provide a status report on each of those projects.

General GENEGA. Yes, we are proceeding with these projects in fiscal year 1995.

CONTINUING AUTHORITIES PROGRAM PROJECTS ADDED IN FISCAL YEAR 1995 COMMITTEE REPORT AND ACT LANGUAGE

PROJECT	STATUS
WHITE RIVER, MORGAN CO. BLUE BLUFF ROAD, IN	PLANNING AND DESIGN ANALYSIS UNDERWAY
WHITE LICK CREEK, BOTTOM ROAD, IN	PLANNING AND DESIGN ANALYSIS UNDERWAY
WHITE LICK CREEK, HENDERSON ROAD, IN	PLANNING AND DESIGN ANALYSIS UNDERWAY
SOUTHWIND MARITIME CENTRE EVANSVILLE, IN	FEASIBILITY STUDY SCHEDULED FOR INITIATION IN FY 95
AUNT LYDIA'S COVE, MA	UNDER CONSTRUCTION
PROVINCETOWN HARBOR, MA	PLANS AND SPECIFICATIONS UNDERWAY
COOLEY CANAL, OH	FEASIBILITY STUDY UNDERWAY
JACKS DEFEAT CREEK, ELLETTSVILLE, IN	RECONNAISSANCE STUDY COMPLETE. LOCAL SPONSOR DOES NOT CHOOSE TO CONTINUE.
HONEY CREEK, IN	SOIL CONSERVATION SERVICE HAS BEEN FUNDED TO UNDERTAKE THIS PROJECT IN LIEU OF CORPS
MISSION ZANJA CREEK, CA	RECONNAISSANCE STUDY UNDERWAY
JACKSON, KY	FEASIBILITY STUDY UNDERWAY
POPLAR BROOK, NJ	RECONNAISSANCE STUDY UNDERWAY
CHEATHAM RESERVOIR, RHODES GOLF COURSE, NASHVILLE, TN	PLANS AND SPECIFICATIONS COMPLETE
GREEN RIVER, CALHOUN, MCLEAN CO., KY	CONSTRUCTION UNDERWAY
CALIENTE MEADOW VALLEY WASH, NV	FEASIBILITY STUDY UNDERWAY
UMPQUA RIVER,WINCHESTER BAY, OR	CONSTRUCTION UNDERWAY
GENEVA, AL	RECONNAISSANCE STUDY SCHEDULED FOR INITIATION IN FY 95

CONTINUING AUTHORITIES PROGRAMS
AFFECT OF NEW POLICIES

Mr. MYERS. How will the proposed new Corps policies related to flood control, navigation, and beach erosion control be applied to the Continuing Authorities Programs?

General GENEGA. Since we propose termination of the Continuing Authorities Programs after fiscal year 1996, we will phase these programs out under existing policy.

Mr. MYERS. Does the budget request for the Continuing Authorities Programs include funds to initiate new studies or new construction projects in fiscal year 1996?

General GENEGA. Yes, however, studies may be initiated only if the resulting project can reach construction approval during fiscal year 1996. Any construction underway or approved in fiscal year 1996 or approved in prior years will be started as soon as sponsors are ready and completed in fiscal year 1996 and subsequent years. After fiscal year 1996, this work will be funded with funds carried over from prior years.

Mr. MYERS. Will you complete all projects underway?

General GENEGA. Phases now underway, that is, reconnaissance study, feasibility study, design, or construction, will be completed. Projects will move on to the next phase only if scheduled to reach construction approval during fiscal year 1996.

Mr. MYERS. Do you plan to submit legislation to deauthorize the Continuing Authorities Programs?

General GENEGA. Yes, a legislative proposal to that effect is being developed.

PROJECTS UNDERWAY

Mr. MYERS. Please provide for the record a table showing all projects, both studies and projects under construction you plan to undertake in fiscal years 1995 and 1996 under all the authorities that make up the Continuing Authorities Program. Include in the table the amounts to be expended on each project.

General GENEGA. We can provide that. However, due to the dynamic nature of these programs, the values shown represent the Corps of Engineers estimate as of February 28, 1995. As studies proceed and costs and benefits are determined, and local interests' willingness to cost share is ascertained, some activities will be terminated and others, not listed, may be initiated.

(The information follows:)

ACTUAL AND PENDING ALLOCATIONS FOR SMALL PROJECTS PROGRAMS
(Funds Shown In $1,000)

Program/Category/Item	FY 1995	FY 1996
Section 14		
Planning and Design Analysis		
DILLON'S BRIDGE, BOGUE CHITTO R., WALTHALL CO., MS	35	0
HIGHWAY 16, TANGIPAHOA RIVER, LA	25	0
STATE HIGHWAY 3066 BELOW INDIAN VILLAGE, LA	48	0
SOUTH SENIOR HIGH SCHOOL, ST. LOUIS CO., MO	8	0
MCKELVEY SCHOOL, ST. LOUIS CO., MO	13	0
FAYETTE COUNTY RD. 23 AND KASKASKIA RIVER, IL,	32	0
LINCOLN COUNTY ROAD 729 AND BIG CREEK, MO	32	0
OSAGE RIVER, LAKE OZARK SEWERLINE, MO	21	0
102 RIVER, SE PICKERING BRD, NODAWAY CNTY, MO	15	0
GRAND RIVER, SALT CREEK BRIDGE, CHARITON CO., MO	14	0
WEST NISHNABOTNA R, OAKLAND, POTTAWATAMIE CO, IA	0	17
ROOSTER ISLAND, MD	110	0
ASHAROKEN VILLAGE, NORTHPORT, NY	75	0
RIKERS ISLAND CORRECTIONAL FACILITY, NY	75	0
SHELTER ISLAND, NY	75	0
OAKWOOD BEACH, STATEN ISLAND, NY	75	0
KANKAKEE RIVER, RAMSEY'S LANDING, JASPER CO., IN	80	0
OCONTO RIVER, CITY OF OCONTO, WI	23	0
RIVER RAISIN, VILLAGE OF DUNDEE, MONROE COUNTY, MI	28	0
HIGHWAY 23/14, JACKSON COUNTY, MN	6	0
MISSISSIPPI RIVER, RIVERVIEW STREET, BELLEVUE, IA	8	0
BIG FORK RIVER, MN	25	0
OXBOW, CASS COUNTY, ND	0	95
RED LAKE RIVER, CROOKSTON, MN	50	0
MANKATO TOWNSHIP, MN	75	0
HENNEPIN COUNTY CSAH 116, MN	15	35
VERNON CENTER, MN	10	65
SOGN, MN	8	0
MELROSE, WI	15	30
AROOSTOOK RIVER, CARIBOU, ME	12	0
SEBAGO LAKE, STANDISH, ME	35	0
EMMONAK, AK	10	15
DEERING, AK	5	15
ROGUE RIVER AT GRANTS PASS, OR	40	0
FOX ISLAND, PIERCE COUNTY, WA	7	29
MURDEN COVE, KITSAP COUNTY, WA	11	25
SNAKE RIVER ABOVE BLACKFOOT, ID	8	20
WILLOW CREEK BELOW LA CROSSE, WA	12	28
LITTLE WEISER RIVER, GLADHART LANE, ID	6	22
GRANDE RONDE RIVER, SPRUCE STREET BRIDGE,OR	38	0
OHIO RIVER, RT 2, PT PLEASANT, WV	10	0
KANAWHA RIVER, RT 60, SO.CHARLESTON, WV	10	0
OHIO RIVER, DRAIN OUTFALLS, RUSSELL, KY	10	0
OHIO RIVER, SEWER LINE, SISTERSVILLE, WV	0	29
MUSKINGUM RIVER HARBOR, MARIETTA, OH	7	8
OHIO RIVER BOAT LEVEE, MARIETTA, OH	0	7
TWELVEPOLE CREEK, WAYNE COUNTY, WV	0	29

ACTUAL AND PENDING ALLOCATIONS FOR SMALL PROJECTS PROGRAMS
(Funds Shown In $1,000)

Program/Category/Item	FY 1995	FY 1996
WHITEWATER RIVER, BROOKVILLE, IN	4	26
EAGLE CREEK, WATERFRONT PARK, INDIANAPOLIS, IN	25	0
OHIO RIVER, NEW RICHMOND, OH	1	24
WHITE RIVER, BLUE BLUFF ROAD, MORGAN COUNTY, IN	35	0
WHITE LICK CREEK, BOTTOM ROAD, MORGAN COUNTY, IN	35	0
WHITE LICK CREEK, HENDERSON-FORD ROAD, IN	38	0
OHIO RIVER, CARROLLTON, KY	38	0
SO FK HOLSTON RV, KINGSPORT, TN	14	0
EMORY RIVER, HARRIMAN, TN	32	0
UT AGRICULT EXP STA, TN	0	16
DITTO LANDING, HUNTSVILLE, AL	3	42
RHODES GOLF COURSE, NASHVILLE, TN	28	0
CLINCH RIVER, KINGSTON, TN	55	0
DUCK RIVER, HOWARD BRIDGE, TN	71	0
CITY OF BEAVER FALLS, WALNUT BOTTOM RUN, PA	9	0
CONNEAUT LAKE, PA, PA	15	0
OHIO RIVER, CHESTER, WV	0	25
FRENCH CREEK, WATTSBURG, PA	22	0
MILLER RUN, CECIL TWP, PA	13	0
ELK CREEK, NUTTER FORT, WV	0	16
SHORT CREEK, OHIO COUNTY, WV	0	26
BUFFALO CREEK SEWAGE TREATMENT PLANT, FREEPORT, PA	0	31
POWER PLANT ROAD, CABRAS ISL, GU	40	0
AGAT SHORELINE, GU	10	0
INARAJAN SHORELINE, GU	10	0
UMATAC SHORELINE, GU	10	0
SOUTH AGAT (ROUTE 2), GU	84	0
ALII DRIVE, HI	45	0
PUNALUU HIGHWAY, OAHU, HI	59	0
HAUULA HIGHWAY, OAHU, HI	59	0
KAAAWA HIGHWAY, OAHU, HI	59	0
GARAPAN BEACH ROAD, CM	60	0
INDIAN BLUFF PARK, EUTAWVILLE, SC	57	0
SINGLETON SWASH, MYRTLE BEACH, SC	46	0
SOUTH CAROLINA DOT BRIDGES, SC	39	0
48TH AVENUE, NORTH BRIDGE, NORTH MYRTLE BEACH, SC	65	0
KINGS CREEK, MS	105	0
FORT JACKSON, CHATHAM COUNTY, GA	20	23
NC AQUARIUM, DARE COUNTY, NC	60	0
KING (WATER PLANT), NC	43	0
ORIENTAL, SOUTH AVENUE, NC	21	0
WEST ROANOAKE CO. ROUTE 639, VA	49	26
COROLLA, WHALEHEAD CENTER, NC	95	0
CORTARO ROAD BRIDGE, AZ	60	0
PINAL CREEK, GLOBE SEWER PLANT, AZ	0	25
BIG TUJUNGA WASH, LOS ANGELES, CA	0	40
91ST AVE. WASTEWATER TREATMENT PLT. PHOENIX, AZ	0	34
CLARKDALE, AZ. WASTEWATER WATER TREAT .PLT. AZ.	6	28
TUTHILL ROAD BRIDGE, MARICOPA COUNTY, AZ	0	36
MADRID FIRE STATION, MADRID ARROYO, NM	25	0
WASHINGTON ON THE BRAZOS STATE PARK, TX	0	103

ACTUAL AND PENDING ALLOCATIONS FOR SMALL PROJECTS PROGRAMS
(Funds Shown In $1,000)

Program/Category/Item	FY 1995	FY 1996
FURNEAUX CREEK, CARROLLTON, TX	26	0
HUTTON BRANCH, REACH H, STREAM 6D3, CARROLTON, TX	38	0
DUDLEY BRANCH, HEBRON PARKWAY, CARROLTON, TX	46	0
BEAR CREEK, COUNTY ROAD 485, COLLIN COUNTY, TX	48	0
CITY DAM, FALL RIVER, NEODESHA KS	20	0
SEWAGE LAGOON, WASHITA RIV, ALEX, OK	20	0
COUNTY ROAD & BRIGDE, ARKANSAS RIV, RALSTON, OK	20	0
WOLF RIVER, RT 51 BRIDGE, MEMPHIS, TN	9	0
BLUE RIVER GREGORY BLVD NR KANSAS CITY MO	20	0
BEAR CRK 24-INCH SEWERLINE WARRENSBURG MO	3	0
BEAR CRK 27-INCH SEWERLINE WARRENSBURG MO	3	0
MARMATON RIVER VERNON COUNTY ROAD MO	5	0
WEST FORK 102 RIVER, TAYLOR COUNTY BRIDGE J55, IA	3	0
102 RIVER, HOPKINS BRIDGE, NODAWAY CO, MO	7	0
DELAWARE R WATER INTAKE, KICKAPOO RES, KS	10	0
BOUQUET RIVER, ELIZABETHTOWN, NY	5	0
GREENBROOK REGIONAL CENTER, SOMERSET, NJ	5	0
FOX RIVER, BRIDGE SITE 7, DAVIS CO, IA	5	0
METLAKATLA, AK	6	0
ANNETTE ISLAND, METLAKATLA, AK	6	0
TRUMBULL METRO HOUSING AUTHORITY, WARREN, OH	9	0
CHUBB RUN, FRANKLIN, PA	5	0
BRADENTON BEACH, FL	5	0
UNSPECIFIED PROJECTS	0	1500
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Subtotal Planning and Design Analysis	3106	2400
Construction		
BLUE RIVER GREGORY BLVD NR KANSAS CITY MO	352	0
CANADAWAY CREEK SEWERLINE, FREDONIA, NY	6	0
SENECA FALLS, NY	136	0
ST. JOSEPH RIVER, BUCHANAN TOWNSHIP, MI	209	0
STERLING CENTER, MN	94	0
POINT SHIRLEY, WINTHROP, MA	390	0
FARMINGTON R, SIMSBURY, CT	206	0
CONNECTICUT R, MIDDLETOWN, CT	15	0
METLAKATLA, AK	168	0
ANNETTE ISLAND, METLAKATLA, AK	83	0
LUMMI SHORE ROAD, WHATCOM COUNTY, WA	448	0
KANAWHA RIVER, RT 60, ST ALBANS, WV	136	0
MUD RIVER, SEWAGE LAGOON, BARBOURSVILLE, WV	447	0
OHIO RIVER, CITY PARK, WEST POINT, KY	150	0
EMBARRASS RIVER, STE MARIE, IL	119	0
GREEN RIVER, CALHOUN, KY	66	0
McGREGOR PARK, CLARKSVILLE, TN	40	0
SEQUOYAH HILLS 2, TN	4	0
CITY OF JAMESTOWN, CHADAKOIN RIVER, NY	46	0
OAKMONT, PA, PLUM CREEK, PA	34	0
NELSON RUN, ROSS TWP, PA	79	0
CHUBB RUN, FRANKLIN, PA	71	0

ACTUAL AND PENDING ALLOCATIONS FOR SMALL PROJECTS PROGRAMS
(Funds Shown In $1,000)

Program/Category/Item	FY 1995	FY 1996
PINOPOLIS DAM, BERKELEY COUNTY, SC	410	0
SANTEE DAM, SC	378	0
COUNTY ROAD 55, ETOWAH COUNTY, AL	30	0
TOMBIGBEE RIVER BRIDGE NO. 6, MONROE COUNTY, MS	241	0
HANCOCK COUNTY SEAWALL, MS	213	0
WAVELAND, MS	336	0
WALNUT CANYON,ANAHEIM, CA	63	0
SHELTER COVE, HUMBOLDT CO., CA	56	0
HWY 194, BENT'S OLD FORT, ARKANSAS R, LA JUNTA, CO	107	0
HIGHWAY 75, EMBUDO CREEK, RIO ARRIBA, NM	185	0
SOUTHERN BLVD, BLACK'S ARROYO, RIO RANCHO, NM	184	0
STATE ROAD 44, RIO SALADO, SAN YSIDRO, NM	184	0
BUFFALO BAYOU, PINEY POINT VILLAGE, TX	350	0
LEVEE, ARKANSAS RIVER, TULSA, OK	119	0
ARKANSAS RIVER, SAND SPRINGS, OK	122	0
CULLEY-BRASHEAR DIVERSION DITCH, MS	0	219
US HWY 65, E CARROLL PARISH, LA	0	171
HWY 80, CLEAR CK, WARREN CO, MS	360	65
WOLF RIV, HGWY 51 BRIDGE, MEMPHIS, TN	460	0
FERGUSON RD BRDG, BARTLETT, TN	0	121
MERMENTAU RIVER, GRAND CHENIER, LA	183	0
MARMATON RIVER, VERNONCO. ROAD, MO	0	93
BEAR CK, UPR SEWER MAIN, WARRENSBURG, MO	39	0
BEAR CK, LWR SEWER MAIN, WARRENSBURG, MO	23	0
TETON RIVER, HGWY BRDG 223, MT	0	0
W FK 102 R, TAYLOR CO BRDG J55, IA	0	35
PUNCH ISLAND RD, DORCHESTER CO, MD	0	148
OCONTO R, US HWY 41, OCONTO, WI	78	0
RIVER RAISIN, E LLOYD RD., MI	124	0
WF D MOINES R, JACKSON CO HWY 23/8, MN	90	0
FOX RIVER,CO. BRIGE NO. 7, IA	51	0
MAZON R, GOOSE LK TWNSHP RD, GRUNDY CO, IL	129	0
MISS. RIV, RIVER VIEW ST, BELLEVUE, IA	0	137
SOGN, MN	23	0
N NASHUA R, SEWER LINE, LEOMINSTER, MA	160	0
BRUSH CK, JEANNETTE, WESTMORELAND CO, PA	0	335
MILLERS RUN, CECIL TWNSHP, PA	0	73
BRADENTON BEACH, BRIDGE STREET, FL	117	0
KING WATER TREAT. PLANT, FORSYTH CO., NC	179	0
S AVE BULKHEAD, ORIENTAL, NC	385	0
WALNUT ST, THOMASVILLE, NC	26	0
MADRID FIRE STATION, NM	155	0
SAN ISIDRO RD, SANTA FE, NM	0	376
CAMINO ALIRE BR, SANTA FE R, SANTA FE, NM	0	379
BEAR CREEK, COLLIN CO RD 485, TX	0	260
FURNEAUX CK, CARROLLTON, TX	0	156
HUTTON BRANCH, CARROLLTON, TX	0	284
DUDLEY BR, HEBRON PKWY, CARROLLTON, TX	0	163
L CANEY R, CANEY, KS	0	130
N CANADIAN R, STATE HGWY 84, OK	0	225
TRIBAL LAGOON, CHICKASKIA R,FT OAKLAND, OK	140	0

ACTUAL AND PENDING ALLOCATIONS FOR SMALL PROJECTS PROGRAMS
(Funds Shown In $1,000)

Program/Category/Item	FY 1995	FY 1996
KIOWA TRIBE HOUSING DEV, ANADARKO, OK	138	0
UNSPECIFIED PROJECTS	259	4140
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Subtotal Construction	9394	7510
Total Section 14	12500	10000
Section 103		
Reconnaissance Studies	261	300
Feasibility Studies		
NORTH NANTASKET BEACH, HULL, MA	100	10
LUMMI SHORE ROAD, WHATCOM COUNTY, WA	154	34
EAST AGANA, GU	10	0
COMMERCIAL PORT ROAD, CABRAS ISL, GU	30	0
39TH AVENUE, NORTH BRIDGE, NORTH MYRTLE BEACH, SC	35	0
LITTLE TALBOT ISLAND, FL	60	50
NORTH BEACH BLVD, HANCOCK CO., MS	40	0
BAYVIEW COURT, MS	40	0
UNSPECIFIED PROJECTS	0	406
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Subtotal Feasibility Studies	469	500
Plans and Specifications		
POINT BCH, MILFORD, CT	186	0
BATTERY PRINGLE, JAMES ISLAND, SC	28	0
NORTH BEACH BLVD, HANCOCK CO., MS	40	0
BAYVIEW COURT, MS	55	0
UNSPECIFIED PROJECTS	0	300
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Subtotal Plans and Specifications	309	300
Construction		
COLONIAL BEACH, VIRGINIA, RENOURISHMENT, VA	0	15
SEA BLUFF BCH, WEST HAVEN, CT	130	0
LINCOLN PARK BEACH SEATTLE, INCL RENOURISHMENT, WA	65	0
BATTERY PRINGLE, CHARLESTON CO., SC	66	0
SANDY POINT OUTFALL, WEST HAVEN, CT	300	275
UNSPECIFIED PROJECTS	0	1610
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Subtotal Construction	561	1900
Total Section 103	1600	3000
Section 107		

ACTUAL AND PENDING ALLOCATIONS FOR SMALL PROJECTS PROGRAMS
(Funds Shown In $1,000)

Program/Category/Item	FY 1995	FY 1996
Reconnaissance Studies	1374	1500
Feasibility Studies		
SHALLOW CREEK SPUR CHANNEL, MD	40	0
NEALE SOUND, MD	78	19
BELFORD HARBOR, NJ	10	0
LAKE ERIE AT COOLEY CANAL, LUCAS COUNTY, OH	22	0
HYANNIS HARBOR, HYANNIS, MA	54	0
LARSEN BAY, AK	25	0
OUZINKIE, AK	14	0
WILLIAMSPORT, AK	68	0
NEWPORT, OR	266	15
CALABASH CK., BRUNSWICK COUNTY, NC & HORRY CO., SC	53	9
ISLAND OF VIEQUES, PR	188	188
UNSPECIFIED PROJECTS	0	669
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Subtotal Feasibility Studies	818	900
Plans and Specifications		
NORTH PASS-PASS MANCHAC, TANGIPAHOA PARISH, LA,	3	0
ISLAND CREEK, ST.GEORGE ISLAND, ST. MARY'S CO., MD	38	0
YORK AND PAMUNKEY RIVERS VIRGINIA, VA	255	255
ROCHESTER HARBOR (WAVE SURGE), NY	460	0
SAUGUS RIVER, SAUGUS, MA	60	0
GLOUCESTER HBR, GLOUCESTER, MA	15	0
PROVINCETOWN HARBOR, PROVINCETOWN, MA	15	0
NEAH BAY, WA	130	0
KAHULUI SBH, MAUI, HI	95	0
UNSPECIFIED PROJECTS	80	845
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* Subsubtotal *	1151	1100
Construction		
RUDEE INLET VIRGINIA BEACH, VA	115	0
AUNT LYDIA'S COVE, CHATHAM, MA	747	0
AGUADILLA HARBOR,PR	287	0
FERNANDINA HARBOR, FL	150	0
NORTH PASS-PASS MANCHAC, LA	264	0
ISLAND CREEK, ST. MARY'S CO., MD	1094	0
UNSPECIFIED PROJECTS	0	1500
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* Subsubtotal *	2657	1500
Total Section 107	6000	5000
Section 111		
Reconnaissance Studies	10	50

ACTUAL AND PENDING ALLOCATIONS FOR SMALL PROJECTS PROGRAMS
(Funds Shown In $1,000)

Program/Category/Item	FY 1995	FY 1996
Feasibility Studies		
UNSPECIFIED PROJECTS	76	100
Total Feasibility Studies	76	100
Plans and Specifications		
UMPQUA RIVER, WINCHESTER BAY, OR	14	0
UNSPECIFIED PROJECTS	100	150
Subtotal Plans and Specifications	114	150
Construction		
UMPQUA RIVER, WINCHESTER BAY, OR	400	0
UNSPECIFIED PROJECTS	0	200
Subtotal Construction	400	200
Total Section 111	600	500
Section 205		
Reconnaissance Studies	4143	100
Feasibility Studies		
BOIS BRULE L & D DISTRICT, MO	0	226
MILL CREEK, OLATHE, KS	128	0
NISHNABOTNA R AND MAIN DITCH 6, HAMBURG, IA	74	0
SALT CREEK LEVEES, LINCOLN, NE	16	108
LOGAN CREEK, PENDER, NE	30	0
MILL BROOK, HIGHLAND PARK, NJ	150	125
CROSS LAKE, NY	125	130
LIBERTYVILLE ESTATES IL	20	0
PENINSULA DRAINAGE DISTRICT NO. 1, OR	220	24
CEDAR RIVER, RENTON, WA	222	171
PIPE CREEK, ALEXANDRIA, IN	10	0
CLARK SPRING BRANCH, DECATUR, AL	75	0
TURKEY CREEK, SUMTER CO., SC	50	20
RIO FAJARDO, PR	10	0
RIO DESCALABRADO, SANTA ISABEL, PR	50	0
RIO GUAMANI, GUAYAMA, PR	33	0
RIO LOCO AT GUANICA, PR	50	0
RIO CULEBRINA/ MADRE VIEJA, AGUADILLA, PR	130	60
RIO EL OJO DE AGUA, AGUADILLA, PR	140	50
BLACK WARRIOR RIVER, NORTHPORT, AL	75	0
OCMULGEE RIVER LEVEE, MACON, GA	16	0
MORAVIAN CREEK, WILKESBORO, NC	5	0

ACTUAL AND PENDING ALLOCATIONS FOR SMALL PROJECTS PROGRAMS
(Funds Shown In $1,000)

Program/Category/Item	FY 1995	FY 1996
SAN PEDRO CREEK, PACIFICA, CA	0	130
ZUNI RIVER, ZUNI, NM	204	0
GUADALUPE RIVER, VICTORIA, TX	40	0
BUFFALO BAYOU, LYNCHBURG PUMP STATION, HOUSTON, TX	39	0
UNSPECIFIED PROJECTS	100	153
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Subtotal Feasibility Studies	2012	1197
Plans and Specifications		
ST. PETERS, MO	207	50
CROSS CREEK, ROSSVILLE, KS	60	0
MAPLE CREEK, HOWELLS, NE	21	0
MILK RIVER, MALTA, MT	57	0
GWYNNS FALLS, BALTIMORE, MD	41	0
SAUQUOIT CREEK, WHITESBORO, NY	250	313
ELIZABETH RIVER, HILLSIDE, NJ	15	0
LEHIGH RIVER BASIN, PA	0	65
W.BRANCH LIMESTONE CREEK, MANLIUS, NY	0	100
LIMESTONE CREEK, FAYETTEVILLE, NY	175	165
LIVERPOOL, IL	40	0
S.E. OTTAWA, IL	25	0
CEDAR FALLS, IA	250	140
ROOT RIVER, HOUSTON, MN	150	540
MAD R, WOODTICK, WATERBURY, CT	45	0
HORSESHOE BEND, GREEN RIVER, KING COUNTY, WA	33	0
FEATHER CREEK, CLINTON, IN	39	61
LIL LIMESTONE CK, JONESBORO, TN	83	0
ESTATE MON BIJOU, ST. CROIX, VI	50	0
TURPENTINE RUN, ST THOMAS, VI	100	0
ESTATE LA GRANGE, ST CROIX, VI	240	0
RIO ANTON RUIZ, PUNTA SANTIAGO, PR	150	0
PEACHTREE CREEK BASIN, ATLANTA, GA	50	0
CHOCTAWHATCHEE AND PEA RIVER BASINS, AL	8	0
SPRINGFIELD CANAL, SAVANNAH, GA	8	0
DANVILLE, VA	19	0
GREAT COHARIE CREEK, SAMPSON CO., NC	35	0
LOWER CREEK, LENOIR, NC	46	0
DELAWARE CREEK, IRVING, TX	7	0
DRY BRANCH, GRAND PRAIRIE, TX	32	0
JOHNSON CREEK, ARLINGTON, TX	92	0
CALLOWAY BRANCH, RICHLAND HILLS, TX	16	0
DUCK CREEK, GARLAND, TX	400	103
WHITE R, BATESVILLE, AR	32	0
PLUM CREEK, WICHITA FALLS, TX	166	0
UNSPECIFIED PROJECTS	0	363
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Subtotal Plans and Specifications	2942	1900
Construction		

ACTUAL AND PENDING ALLOCATIONS FOR SMALL PROJECTS PROGRAMS
(Funds Shown In $1,000)

Program/Category/Item	FY 1995	FY 1996
CANAL 43, AR	24	0
MAYFIELD CREEK AND TRIBS., KY	977	0
PEBBLE CREEK & ELKHORN R, SCRIBNER, NE	112	0
LODGEPOLE CREEK, SIDNEY, NE	150	0
PORT JERVIS, NY	640	487
SWAN CREEK, TOLEDO, OH	1177	0
OELWEIN, IA	46	0
DES MOINES, IA, RACCOON RIVER, IA	1690	579
GILMORE CREEK, WINONA, MN	375	400
RIVERDALE, W. SPRINGFIELD, MA	300	0
ISRAEL RIVER, LANCASTER, NH	0	25
FLATHEAD RIVER NEAR KALISPELL, MT	27	0
SPRING CREEK, SPENCER, WV	174	0
LANCASSANGE CREEK, CLARK COUNTY, IN	437	0
JONES RUN PUMP STATION, FRANKFORT, KY	753	0
KAHAWAINUI STREAM, HI	90	500
KAWAINUI MARSH, OAHU, HI	1439	2767
SAVAN GUT, ST. THOMAS, VI	0	2000
RIO CIBUCO, VEGA BAJA, PR	1625	402
UPPER GORDONS CREEK, HATTIESBURG, MS	2323	0
ESLAVA CREEK, MOBILE, AL	1081	154
TALLAHALA CREEK, LAUREL, MS	106	0
COLORADO RIVER, GRAND JUNCTION, CO	862	0
LAKE ELSINORE, CA	183	0
UPPER ZACATE CREEK, LAREDO, TX	1000	316
SULPHUR BRANCH, EULESS, TX	1600	1230
RUSH CREEK, ARLINGTON, TX	540	7
TEN MILE CREEK, LANCASTER, TX	94	0
CALLOWAY BRANCH, RICHLAND HILLS, TX	1132	0
JOHNSON CREEK, GRAND PRAIRIE, TX	1300	104
WHITE R, BATESVILLE, AR	940	683
CROOKED CRK, HARRISON, AR	52	0
MILL CRK, FT. SMITH, AR	641	0
JACKSONPORT, AR	40	73
BOEUF TENSAS BASIN, CANAL 19, AR	783	0
MILK RIVER, MALTA, MN	687	100
MAPLE CREEK, HOWELLS, NE	490	0
LIVERPOOL, IL	578	700
SOUTHEAST OTTAWA TWP HS, OTTAWA, IL	453	1307
ROOT RIVER, HOUSTON, MN	0	1000
LAC QUI PARLE RIVER, MN	0	50
MAD R, WATERBURY (WOODTICK AREA), CT	750	550
HARGUS CREEK, CIRCLEVILLE, OH	224	0
SUGAR CREEK, BELLBROOK, OH	0	145
ESTATE MON BIJOU, ST. CROIX, VI	0	1500
CHOCTAWHATCHEE & PEA R FLD WARN SYS, AL	100	88
LOWER CREEK, LENOIR, NC	75	1621
DRY BRANCH, IRVING & GRAND PRAIRIE, TX	300	1000
TEN MILE CREEK, DESOTO, TX	500	634
JOHNSON CREEK, ARLINGTON, TX	1968	2123
DELAWARE CREEK, IRVING, TX	100	300

ACTUAL AND PENDING ALLOCATIONS FOR SMALL PROJECTS PROGRAMS
(Funds Shown In $1,000)

Program/Category/Item	FY 1995	FY 1996
CATO SPRINGS & TOWN BRS, FAYETTEVILLE, AR	25	75
WHITE R, BATESVILLE, INDEPEND CO, AR	940	683
UNSPECIFIED PROJECTS	0	200
	------	------
Subtotal Construction	29903	21803
Total Section 205	39000	25000
Section 208		
Feasibility Studies	63	100
Plans and Specifications		
JUAN MENDEZ CHANNEL, PR	60	20
UNSPECIFIED PROJECTS	77	90
	------	------
Subtotal Plans and Specifications	137	110
Construction		
UNSPECIFIED PROJECTS	100	290
	------	------
Subtotal Construction	100	290
Total Section 208	300	500
Total Continuing Authorities Program	60000	44000

DAM SAFETY ASSURANCE PROGRAM

Mr. MYERS. The budget request includes a new Dam Safety Assurance Program. How was this activitiy funded in the past? It appears that the funds requested for this new program are for dam safety projects that may be approved in fiscal year 1995 or fiscal year 1996. Is that correct? What funds are used to prepare the dam safety reports that for the basis for approval of individual projects?

General GENEGA. Mr. Chairman, in fiscal years 1986, 1987 and 1988, Congress appropriated a total of $50,000,000 of Construction, General funds for dam safety assurance new starts which may be approved by the Assistant Secretary of the Army (Civil Works) (ASA(CW)). Most of these funds were revoked to compensate, in part, for the large reductions for savings and slippage and prior year unobligated balances in FY 1988 through FY 1992. After dam safety reconnaissance reports were approved by the ASA(CW), Headquarters reprogrammed funds to start work on these projects and included them in the President's budget at the earliest opportunity. This practice is in accordance with the purpose for which dam safety assurance program funds were budgeted and appropriated as well as the Corps normal reprogramming criteria. Funds in the amount of $2,000,000 for the dam safety assurance program are included in the President's FY 1996 budget for new starts which may be approved by the ASA(CW) as a result to dam safety studies now underway. Without such flexibility for this program, dam safety assurance projects would have to wait as long as two years for construction funding through the formal budget process.

Mr. MYERS. How would follow-on funds for those projects be presented in the budget?

General GENEGA. Once a report is approved by the ASA(CW), follow-on funds are included in the budget request as line items, at the next opportunity. Several such dam safety projects are included in the Fiscal Year 1996 request. In the interim, available dam safety funds are used to initiate engineering and design, so as to minimize delays in implementing needed corrections.

SECTION 1135, PROJECT MODIFICATIONS FOR THE IMPROVEMENT OF THE ENVIRONMENT

Mr. MEYERS. Please provide for the record a list of the projects currently underway and scheduled to start in fiscal year 1995 under the section 1135 program.

General GENEGA. Currently under the section 1135 program, 62 studies and projects are underway. Additional studies and projects will be initiated in fiscal year 1995 as requests are received and approved and funding allows. A list of the projects underway will be provided for the record.

(The information follows:)

SECTION 1135 PROJECTS - 28 FEBRUARY 1995

APPROVED FOR IMPLEMENTATION

1. ORWELL LAKE, MN
2. SALT BAYOU, MCFADDIN RANCH WETLANDS, TX
3. YOLO BASIN WETLANDS, CA
4. LAKE O' THE PINES (FERRELLS BRIDGE DAM), TX
5. LAGUNA MADRE SEAGRASS ENHANCEMENT PROJECT, TX
6. ANACOSTIA RIVER AND TRIBUTARIES, MD
7. CARLYLE LAKE WILDLIFE MANAGEMENT AREA, IL
8. NARROWS DAM - LAKE GREESON, AR
9. DUCK ISLAND SUBIMPOUNDMENT, LAKE BARKLEY, KY
10. MISSISSIPPI RIVER OUTLETS, VENICE, LA
11. WATERFOWL PONDS, LAKE WINNIBIGOSHISH, MN
12. GREEN ISLAND HEADWALL MODIFICATION, IA
13. MISSISSIPPI RIVER MAST TREE PLANTING PROJECT, IA and IL
14. GALILEE SALT MARSH RESTORATION, RI

FEASIBILITY PHASE

15. TUNICA CUTOFF LAKE, WEIR, MS & AR
16. SOUTH PASS, MISSISSIPPI RIV., BATON ROUGE - GULF OF MEXICO,LA
17. WETLAND RESTORATION, OCKLAWAHA RIVER, FL
18. JACKSON HOLE, WY
19. CORDELL HULL LAKE, WATERFOWL HABITAT, TN
20. SONOMA BAYLANDS TIDAL WETLANDS, SONOMA COUNTY, CA.
21. HIDDEN LAKE RESTORATION, NE
22. WRIGHT PATMAN LAKE WATERFOWL HABITAT RESTORATION, TX
23. KISSIMMEE RIVER, FL
24. WYNOOCHEE ANADROMOUS FISH RESTORATION, WA
25. SIMMON'S FIELD CONTROL STRUCTURE, BIG LAKE AREA, AR
26. YOLO BASIN WETLANDS, DAVIS SITE, SACRAMENTO, CA
27. MURPHY ISLAND, SANTEE WILDLIFE REFUGE, SC
28. LOWER CACHE RIVER STATE NATURAL AREA - WATER CONTROL STRUCTURE, IL
29. MORGAN POINT BENDWAY CLOSURE STRUCTURE, AR
30. HABITAT RESTORATION OF LAKE HASTY AT JOHN MARTIN DAM, CO
31. BUCK RUN MODIFICATION , MO
32. MISSOURI RIVER LEVEE SYSTEM, UNIT L-246, MO
33. MUNYON ISLAND WETLAND RESTORATION, PALM BEACH CO., FL
34. LOST CREEK RESTORATION, VOLUSIA CO., FL
35. OLD HICKORY LAKE WILDLIFE SUB-IMPOUNDMENTS, TN
36. SAGAMORE MARSH, CAPE COD CANAL, MA
37. LAKE WHITTINGTON WEIR, MS and AR
38. CENTER HILL LAKE - CANEY FORK RIVER, TN
39. GULF INTRA COASTAL WATERWAY, PLAQUEMINE LOCK, LA
40. JUG CREEK WATERFOWL PROJECT, GA
41. PORTNEUF RIVER, POCATELLO, ID, UNIT RESTORATION
42. SAN LORENZO RIVER HABITAT RESTORATION, CA
43. BIG CYPRESS BAYOU BELOW LAKE O'the PINES, TX
44. COOS BAY, WESTERN SNOWY PLOVER HABITAT MANAGEMENT, OR
45. TWENTYMILE CREEK HABITAT RESTORATION, MS
46. RIP RAP LANDING MOIST SOIL UNIT DEVELOPMENT, IL
47. AMAZON CREEK WETLANDS, OR
48. DAIRY CREEK - STURGEON LAKE RESTORATION, OR
49. REDMOND CHANNEL RESTORATION, UT
50. KAWAINUI MARSH RESTORATION, HI

51. TENKILLER LAKE, OK - TAILWATER RESTORATION
52. KOOTENAI RIVER POND MODIFICATION, MT
53. DEROIN BEND CHANNEL RESTORATION, MO
54. VALDEZ HARBOR, AK
55. CEASAR CREEK WETLAND AND PRAIRIE DEVELOPMENT, OH
56. CATHERINE CREEK RESTORATION PROJECT, UNION, OR
57. CALIFORNIA BEND CHANNEL RESTORATION PROJECT, NE
58. WALLA WALLA RIVER, OR
59. LATHAM RIVER, JEKYLL ISLAND, GA
60. SEA LAMPREY BARRIER, SOO LOCK COMPLEX, MI
61. LITTLE PITCHER LAKE, IN
62. MILFORD LAKE HABITAT RESTORATION PROJECT, KS

SECTION 1135, PROJECT MODIFICATIONS FOR THE IMPROVEMENT OF THE ENVIRONMENT

Mr. MEYERS. Of the funds requested for fiscal year 1996, how much is required to continue ongoing work and how much is for new projects?

General Genega. Of the $24,280,000 requested for fiscal year 1996 approximately $2,815,000 is for phases underway or committed as of 28 February 1995, another $11,684,000 is for scheduled new phases for projects currently in the feasibility phase. The remaining amount, $9,781,000, is for new projects which may be initiated this year as well as for projects to be initiated in FY 1996.

Mr. MEYERS. Have the projects to be initiated in fiscal year 1996 under the section 1135 program been selected? If so, provide a list of the projects for the record.

General GENEGA. The section 1135 budget request is programmatic, rather than project specific. No projects have been specifically selected for initiation in fiscal year 1996, however, all projects now underway with continuing requirements in fiscal year 1996 will be funded.

Mr. MEYERS. The amount requested for the section 1135 program is three times greater than the amount provided in fiscal year 1995. How can you justify this increase when you claim that budgetary constraints have caused you to pursue a reduction in the Corps' role in flood control projects.

General GENEGA. The administration believes that ecosystem restoration is a national priority deserving increased funding. The section 1135 program has broad support and is just entering its fifth year of funding. As all of the parties involved progress through the learning curve, there has been an increase in the numbers of studies initiated and in the number progressing to implementation. It is in the latter stage where the bulk of the funds for any one project are targeted. The size and complexity of the projects, and therefore costs have also been increasing.

SECTION 204, WETLAND AND AQUATIC HABITAT CREATION

Mr. MEYERS. Please provide for the record a list of the projects being performed in fiscal year 1995 under the authority of section 204 of P.L. 102-580.

General GENEGA. Currently under the section 204 program, 7 projects are in the planning or design phases. Additional studies and projects will be initiated in fiscal year 1995 as requests are received and approved and funding allows. A list of the projects underway will be provided for the record.

(The information follows:)

SECTION 204 PROJECTS - 1 March 1995

DESIGN PHASE

1. CHESTER RIVER, BODKIN ISLAND, MD
2. LOWER MERMENTAU RIVER AND BAR CHANNEL, LA

FEASIBILITY PHASE

3. POPLAR ISLAND RESTORATION PROJECT, MD
4. BARATARIA BAY WATERWAY, GRAND TERRE, JEFFERSON PARRISH, LA
5. SABINE NATIONAL WILDLIFE REFUGE, CAMERON PARISH, LA
6. BROWN LAKE, CAMERON AND CALCASIEU PARISHES, LA
7. HOUMA NAVIGATION CANAL, CAT ISLAND PASS, LA

SECTION 204, WETLAND AND AQUATIC HABITAT CREATION

Mr. MEYERS. Of the amount requested in fiscal year 1996, how much is required to continue ongoing work and how much is for new projects?

General Genega. Of the $15,000,000 requested for fiscal year 1996 approximately $11,131,000 is for scheduled new phases for projects with funding as of 28 February 1995. The remaining amount, $3,869,000, is for new projects which may be initiated this year as well as for projects to be initiated in FY 1996.

Mr. MEYERS. Have the projects to be initiated in fiscal year 1996 been selected? If so, provide a list for the record.

General GENEGA. The section 204 budget request is programmatic, rather than project specific. No projects have been specifically selected for initiation in fiscal year 1996, however, all projects now underway with continuing requirements in fiscal year 1996 will be funded.

AQUATIC PLANT CONTROL

Mr. MYERS. Why have no funds been included to continue the Aquatic Plant Control Program?

General GENEGA. This program is seen as responding primarily to local problems, and we are proposing to turn over responsibility for addressing these problems to local interests.

Mr. MYERS. Please provide for the record a breakdown by state of how the funds provided in fiscal year 1995 are being utilized.

General GENEGA. Certainly, Mr. Chairman.

(the information follows:)

AQUATIC PLANT CONTROL

	STATE	FY 1995
CONTROL		
	LOUISIANA	600,000
	VIRGINIA	120,000
	WISCONSIN	105,000
	WASHINGTON	177,000
	SOUTH CAROLINA	1,160,000
	FLORIDA	2,397,000
	PUERTO RICO	122,000
	ALABAMA	80,000
	GEORGIA	82,000
	NORTH CAROLINA	45,000
	TEXAS	289,000
CONTROL SUBTOTAL		5,177,000
PLANNING		
	AQUATIC PLANT CONTROL OPERATIONS CENTER	100,000
	MASSACHUSETTS	5,000
	CALIFORNIA	3,000
PLANNING SUBTOTAL		108,000
RESEARCH		
	FLORIDA	2,500,000
	NATIONWIDE	4,000,000
RESEARCH SUBTOTAL		6,500,000
AQUATIC PLANT CONTROL TOTAL		11,785,000

MARINE BOARD

Mr. MYERS. Question: What is your authority to provide funds for the activities of the Marine Board of the National Academy of Sciences?

General GENEGA. The Corps does not have a specific Congressional authorization for funding the Marine Board. Our authority rests in our technology transfer responsibility and the Congressional mandate to execute the dredging mission. The Marine Board is funded through the Corps Dredging Operations Technical Support (DOTS) program established in 1978 to provide technology transfer of research results to Corps navigation projects. Congressional authority for State regulation and Federal agency oversight of Corps dredging activities has increased over the past twenty years. States and Federal agencies are less willing to accept Corps positions regarding contaminate status of dredged material and recommended alternatives. The Corps uses the Marine Board to undertake activities through the DOTS technology transfer program to develop independent reports and recommendations on dredging and management of dredged material at Corps projects.

Mr. MYERS. Question: What exactly will the Marine Board do with the funds you provide?

General GENEGA. The Marine Board provides evaluation and recommendations that are used by the Corps to shape policies and respond to Congressional mandates for independent review of dredging and dredged material disposal practices. The unbiased and independent evaluations of the Marine Board are used by the Corps to develop policy guidance to the field. Currently, the Marine Board is assessing the state of practice for remediation of contaminated sediments. This activity is in response to continued Congressional authorizations and appropriations for dredged material remediaton research on the Great Lakes and Atlantic northeast. The present study will evaluate dredged material remediation technologies and offer recommendations for policy and Congressional action. Interim control measures will be identified and appraised to determine their applicability to classes of problems, their affordability, and practicality. The Board will address how information about risks, costs, and benefits can be used and communicated to guide decision making concerning the management of contaminated dredged material. Existing technologies will be assessed and research needs identified that are critical for enhancing the use of existing technologies in contaminated dredged material management. The Board will prepare a report that provides an assessment of the nation's capability for remediation and managing contaminated dredged material, and chart a course for needed development in technology and management.

MARINE BOARD ACTIVITIES IN FISCAL YEAR 1996

General GENEGA. In fiscal year 1996, we plan to ask the Marine Board to assess the application of seasonal dredging restrictions and prepare an independent report to aid Corps negotiations with State and Federal resource agencies. Seasonal restrictions imposed as State water quality and coastal zone consistency compliance requirements are the single largest factor contributing to our inability to execute the Corps dredging mission. Delays caused by seasonal restrictions reduce channel navigability, increase project costs, create operational problems, and do not always achieve the intended objective.

Mr. MYERS. Question: What other sources of funds does the Marine Board have?

General GENEGA. The Marine Board is also funded by the Environmental Protection Agency, Navy, Maritime Administration and other Federal agencies under the cooperative agreement for the support of the Marine Board, which is administered by the Minerals Management Service of the Department of Interior for 20 agencies and departments.

DREDGING RESEARCH

Mr. MYERS. Since the early 1970's, how many different research programs has the Corps had related to dredging and dredged material disposal?

and

Mr. MYERS. What has been the total cost of these efforts?

General GENEGA. There have been four dredging related research programs at the Corps during this time period. These programs have addressed the priority research needs of the Corps $500M per year O&M dredging program. All were completed on schedule consistent with Congressional funding.

Dredged Material Research Program (DMRP) - $36M over 5 years

Long-Term Effects of Dredging Operations (LEDO) is an ongoing program and is presently funded at approximately $1.3M per year.

Field Verification Program (FVP) - $7.2M over 6 years

Dredging Research Program (DRP) - $35M over 7 years

ENVIRONMENTAL REVIEW GUIDE FOR OPERATIONS (ERGO)

Mr. MYERS. Will there be a third cycle of Environmental Review Guide for Operations assessments following the second cycle?

General GENEGA. Environmental Review Guide for Operations assessments are a continuing process and we expect to have repetitive cycles. The reason for repetitive cycles is that federal and state environmental laws are constantly changing and new ones are added regularly. The assessment process gives us the opportunity to review our situation based on all current environmental laws and assure that projects meet and maintain compliance requirements.

HAZARDOUS WASTE SITE RESTORATION INITIATIVE

Mr. MYERS. Will the funds requested for the Hazardous Waste Site Restoration Initiative be used to clean up any sites that are currently known to exist?

General GENEGA. We need to conduct comprehensive surveys of the projects to locate, document, and prioritize hazardous waste sites. Some facility managers have anecdotal information about locations and types of past operations, but lack specifics. The exact nature and extent of the sites, their potential as serious environmental threats, and the corrective actions required, will be quantified under this initiative. Out year funding will address corrective actions

RANGER UNIFORM PURCHASES

Mr. MYERS. What is your authority to purchase park ranger and manager uniforms? How much will be spent on uniforms in fiscal year 1996?

General GENEGA. Our authority to purchase uniforms is contained within Section 164 of Public Law 98-63 (5 U.S.C. 5901), U.S. Army Corps of Engineers Civilian Uniform Allowance. Approximately $525,000 will be spent on uniforms in fiscal year 1996. The actual amount will depend on the number of uniformed employees and the allowance amount expended per individual during the year..

POLLUTION PREVENTION PROGRAM

Mr. MYERS. Who will administer the funds requested for the Pollution Prevention Program?

General GENEGA. Funds for Pollution Prevention will be managed at the Headquarters for prioritized distribution through the districts to each project. Headquarters retains an oversight role; to optimize the corporate knowledge and experience gained in developing pollution prevention assessments and plans, and to foster information transfer across division boundaries.

Mr. MYERS. Please provide more detail on how the funds requested will be utilized.

General GENEGA. Projects and facilities will be assessed for the pollution prevention opportunities available. We have already begun, with the assistance of EPA, to draft opportunity assessments for several "typical" facilities that can be tailored to individual projects across the Corps. Solutions, such as alternative materials and processes for source reduction, will be implemented emphasizing investments with a payback period of three years or less.

SPECIAL RECREATION USER FEES (SRUF)

Mr. MYERS. How much do you expect to collect in fiscal year 1996 from recreation user fees?

General GENEGA. We expect to collect approximately $33 million in recreation user fees in 1996.

Mr. MYERS. Aren't all the fees that are collected subsequently used to operate, maintain and improve recreation facilities?

General GENEGA. Yes, Mr. Chairman. We expect to collect $30 million in recreation user fees in 1995, which will be returned to us in fiscal year 1996 Operation and Maintenance, General appropriations to operate, maintain and improve recreational facilities. We are requesting $196 million in fiscal year 1996 for the operation and maintenance of our recreation sites and facilities, so clearly all the fees collected are used subsequently to operate, maintain and improve recreation facilities.

Mr. MYERS. Why is a new program for reinvesting user fees in improvements to recreation sites needed?

General GENEGA. The intent of this program is to assure our recreation users that the fees they pay for the use of Corps operated recreation facilities contribute to the improvement of those facilities. Site and facility improvements funded through recreation user fees are visible to paying uers and contribute significantly to their willingness to pay. The reinvestment of user fees for improvements, rather than just routine operations and maintenance activities, will result in improved public acceptance of the user fee program and will enhance future revenue potential through the public good will it will engender.

REGULATORY PROGRAM

Mr. MYERS. If the requested funds are provided, when will the administrative appeals process for the Regulatory Program be in place?

General GENEGA. If funds are provided, we plan to have regulations finalized in the first quarter of fiscal year 1996 at which time we will begin placing and training appeals review personnel. We expect to have a fully operational administrative appeals process by the middle of fiscal year 1996.

Mr. MYERS. Can you provide us with any details of the administrative appeals process?

General GENEGA. Under our soon-to-be-proposed regulations, a landowner could challenge permit denials and jurisdiction determinations without having to enter the court system. Jurisdiction determinations could be challenged and initially reviewed by an independent reviewer in a district office. A second level of appeal would be available by referring the determination to a regulatory expert in the Division office. For permit denials, there would be a one-step appeal directly to an appeals reviewer in the Division office. Final appeal decisions would be made by the Division Engineer. Under the proposed system, while applicants and property owners could appeal decisions, third parties would be permitted to provide input in the appeals process on permit denials.

Mr. MYERS. What percent of your permit decisions are currently made within 90 days?

General GENEGA. Overall, the average time for all types of section 404 permits is 26 days. General permits, which account for over 80 percent of all section 404 permits, are completed in an average of 16 days. We estimate that sixty to sixty-five percent of our standard permits are completed within 90 days. Currently, we do not use a 90-day measure for standard permits; we have other performance data that allows us to make this estimate.

Mr. MYERS. Are you currently engaged in negotiations with any state regarding takeover of the section 404 program?

General GENEGA. At this time we are developing a memorandum of agreement with the state of Maryland to determine which waters are assumable and to settle some administrative matters. Final approval for state assumption, however, is made by the Environmental Protection Agency.

FLOOD CONTROL & COASTAL EMERGENCIES PROGRAM

Mr. MYERS. What is the current status of the Flood Control and Coastal Emergencies account?

General GENEGA. Of the $58.2 million available in the account on 1 October 1994, approximately $30.3 million has been allocated to emergency preparedness and operations activities and ongoing levee rehabilitation work remaining from the Midwest Floods of 1993. In addition, the remaining funds of $27.9 million have been committed for additional Midwest levee rehabilitation requirements, emergency operation activities associated with the Northridge earthquake, the Southeast Floods of 1994, the California Floods of 1995, and future requirements for the remainder of fiscal year 1995.

Mr. MYERS. Would you please explain what the Federal Response Plan is?

General GENEGA. The Federal Response Plan, developed through the efforts of 26 departments and agencies of the Federal government and the American Red Cross, describes the basic methodology by which the Federal government will mobilize resources and conduct activities to assist states in coping with the consequences of significant disasters.

Within this Plan, the Department of Defense has designated the U.S. Army Corps of Engineers as the primary agency for planning, preparedness and response under the Emergency Support Function #3, Public Works and Engineering. The purpose of the Emergency Support Function is to provide lifesaving or life protecting assistance to augment efforts of the affected state(s) and local response efforts following a major or catastrophic disaster.

The process begins by local governments identifying their requirements for public works and engineering assistance to the state. If sufficient resources are not available at the state, the requirement will be forwarded to the emergency Support Function #3 element in the FEMA established Disaster Field Office. The Corps will assign the mission to one of its offices, in or near the disaster area, to deliver the required Federal assistance.

GENERAL EXPENSES - HEADQUARTERS STAFFING REDUCTIONS

Mr MYERS You state that about one-half of the 194 headquarters' positions that have been eliminated during the period 1989-1995 have been transferred. Where were they transferred to?

General GENEGA There have been a number of management initiatives in the last several years to evalute the roles and missions of the Headquartersstaff and segregate true Headquarters functions from operating functions that support the Headquarters. These initiatives resulted in a transfer in FY 91 of 67 positions assigned to the HQ who were performing operating functions, such as managing the HQ operating budget and manpower, operating human resources functions, etc., to the Humphreys Engineer Center Support Activity In FY 92, the HQ recognized a continuing need for analytical support for the Civil Works mission, and transferred three positions from the HQ to the Engineering Strategic Studies Center In FY 94, the HQ directed that the three Regional Processing Centers for CEAP conversion be reduced to two sites at WES and North Pacific Division (NPD), eliminating the Rockville, Maryland site Responsibility for operating the Regional Processing Centers was assigned to these two locations and resulted in transferring 14 positions from the HQ manning document to WES and NPD. Also in FY 94, the HQ was reduced three spaces, which were transferred to WES to support PROMIS software development and maintenance. These transfers out of HQ to other staff elements total 87, approximately 45% of the 194 total positions eliminated from the HQ.

General Expenses - New Headquarters Building

Mr. MYERS. You indicate that certain features of your new headquarters building will not be borne by GSA and that those features will cost $55,765,000. What happens if those funds are not provided?

General GENEGA. These funds are our initial planning estimates and represent all costs associated with the move and not just specific building features. They include revolving fund costs of $35,925,000 to cover design, procurement, construction, and installation of non-standard features such as our Data Center and Emergency Operations Center as well as equipment necessary to provide state of the art communications systems and building furnishings and fixtures. The remaining $19,840,000 provides for technical support services, employee relocation, and other operational costs associated with the move. Inability to obtain these funds would not only restrict our ability to perform our mission and properly support our Corps team, but would delay the contracts already awarded by GSA and could lead to contractor claims for damages. Recognizing the criticality of these funds and the budget restrictions, we are continuing to work with GSA to develop innovative ways such as "one-stop" relocation services to reduce overall costs of technical services and also speed project completion. In addition, we will be further refining space requirements and non-standard feature costs. While these efforts are still on-going, we do believe that by next year's budget submission we will have reduced the Corp's cost of the new facility similar to the reductions GSA has made in their overall design and construction cost.

Mr. MYERS. Of the total, how much will be funded through the civil works program?

General GENEGA. Relocation costs are being split based on the current and projected number of full time equivalent personnel assigned to the civil and military programs of the Corps. Using this criteria, the $19,840,000 will be split equally between the civil and military appropriations at approximately $9,920,000 . each.

Mr. MYERS. Are funds included in GSA's fiscal year 1996 budget request for the new headquarters building?

General GENEGA. Yes, GSA's budget request includes $36,760,000 which will provide the final increment of construction funding necessary to complete our new headquarters building.

GENERAL EXPENSES - POLICY REVIEW STAFFING REDUCTIONS

Mr. MYERS. When will we begin to see savings from the decision to eliminate policy review from the division offices?

General GENEGA. We began to capture the savings from the elimination of policy review in Divisions with the FY 95 manpower allocations. In compliance with the Corps Streamlining Plan, the Division Office staff was reduced by 14 full-time equivalent (FTE) workyears in FY 95. Their General Expenses funding guidance recommended that the savings from eliminating policy review at the Division Offices should be applied to their FY 95 FTE reductions. In addition, we have a task force reviewing the roles and missions of the HQ and Division Offices, and developing an implementation plan with proposed FTE savings. Task force recommendations will impact a number of Division Office functions so that additional savings from eliminating policy review alone may be hard to distinguish from the aggregate savings from changing the way Divisions conduct business. For example, division offices with collocated districts are being encouraged to consolidate Division and District offices, which will effect savings in overall operating and support costs and eliminate duplicate functions, such as Logistics and Safety. These mergers will result in various cost distribution changes, which will make it more difficult to extract savings from a singular action.

GENERAL EXPENSES - OFFICE OF THE CHIEF OF ENGINEERS STAFFING

Mr. MYERS. How many people are currently employed in the Office of the Chief of Engineers? Of the total, how many are civil works funded?

General GENEGA. The total current staffing level for the Office of the Chief of Engineers is 1,019 full-time permanent positions. Of this number, 494 positions support direct or reimbursable military programs. Of the remaining 525 civil works positions, 479 are funded from General Expenses and 46 from other appropriations. The "other civil" spaces consist of two groups. 33 positions in support for other agencies, which are funded on a reimbursable basis by these agencies, and 13 positions physically located in Huntsville Division, who provide database maintenance and systems development for Corps-wide financial management systems. Six of these latter spaces are funded from the Centralized Accounts, which will end in FY 95, and seven are funded through the Plant Replacement and Improvement Program account for CEFMS development and deployment. All 13 of these positions will transfer from Headquarters to the Central Finance Center proposed for FY 96, and will be funded on a fee-for-service basis.

GENERAL EXPENSES - OFFICE OF THE CHIEF OF ENGINEERS STAFFING

Mr. MYERS. Could you briefly describe the impacts if funds are not provided for each of the civil program accounts?

General GENEGA. The Program Accounts are primarily an outgrowth of the former HQ Centralized Accounts, which will be abolished as of the end of FY 95. The HQ staff conducted a thorough review of each Centralized Account to determine whether it could be eliminated, or was required to support the Corps' missions. Those activities considered a HQ responsibility and essential to be continued are budgeted in the General Expenses account. The Civil Program Accounts consist of four categories of requirements: Automated Information Systems Maintenance, Long-Term Training/Professional Development, Civil Works Guidance Maintenance Program, and the Mission-Unique Requirements, such as the Headquarters (HQ) Relocation Project.

The Automated Information Systems Maintenance accounts consist of various computer-aided engineering, design, drafting, and real estate management systems used Corps-wide. Some systems are required by regulation or mandated by DoD, and support Tri-Service activities. Where these systems support both civil and military missions, the GE budgeted amounts represent the civil share only. These systems provide for central databases with uniform engineering data, shared technology; consistent cost estimates; construction equipment manuals to support independent government estimates in bid protests, claims, and appeals; and compatible data structures for data integration. Failure to maintain these systems will eventually cause increased costs to the Civil Works program in several ways. Divisions and Districts would have to separately fund some systems causing cost duplication; cost estimates would be more expensive to develop and could be less accurate, data duplication is likely in some cases, and we would not have timely, accurate information available for programmatic purposes or to respond to Congress and others.

Funding for Long-Term Training and Professional Development is essential to provide training and developmental opportunities to high potential employees. This training helps to keep them abreast of current happenings and technology in their respective career fields and prepares them for higher level management positions. Training experiences include classroom or other formal training, seminars, university study, or developmental work experience assignments among Corps activities. Objectives are to provide high potential employees the training and development to enable them to become successful mid and upper level managers, or provide an opportunity for gaining a different perspective from field personnel on assignment to HQ, or vice versa. Assignments are for a minimum of 90 days and maximum of one year, and are competitively nominated and selected. Long-Term Training and Professional Development were previously centrally funded at HQ, with a pro rata cost distributed across all Corps activities, to ensure all employees were permitted an equal opportunity to compete. Direct-funding this training from project overhead might compromise the ability of a smaller district or field office to provide an equal opportunity, and would add to cost-shared project costs. With the disestablishment of the Centralized Accounts, continuation of these Headquarters-sponsored training programs is submitted for funding in the GE account. If funds are not received to support these programs, the Corps workforce will be ill prepared for the leadership and management challenges of the Corps' various and changing roles and missions, and the Corps' professionalism will suffer.

The Civil Works Guidance Maintenance Program provides for maintenance activities on over 450 civil works engineering guidance documents. This program is an extension of the intensive five-year guidance update program from FY 89-94, during which we developed or brought up to date over 300 documents. The funding request in the GE account for FY 96 represents the previously centralized project-related guidance update costs, essential for efficient functioning of district design and construction activities. Without these funds, the goal to update each document on no more than a 10-year cycle and to reduce regulations by consolidating guidance documents will be jeopardized, progress will be slowed, time will be lost, and costs will increase due to using outdated guidance and regulations.

The Headquarters Relocation Project's funding requirement for FY 96 consists primarily of the Civil Works share of relocation planning costs for moving the Headquarters to the Southeast Federal Center in FY 98/99. The funding requirement includes project management costs and contractual support for design and space requirements review, and determining telecommunications/AV requirements. Without this funding, the long awaited move of the Headquarters will be further delayed as contract awards planned for FY 96 slip and costs will increase.

The remaining item in the Program Accounts is Corps participation on the Federal Geographic Data Committee (FGDC). This committee was established in accordance with OMB Circular A-16, entitled "Coordination of Surveying, Mapping, and Related Spatial Data Activities." The Corps is a member agency and represents Civil Works facilities, and environmental interests in geospatial data. Civil Works participation in the creation of FGDC geospatial data policies, guidelines, and standards will ensure that policies and standards will be consistent with Corps Civil Works needs and enable the Corps to adapt its data architecture to emerging standards at minimal cost. These potential savings and cost avoidance will be lost without the Corps' expertise and involvement in the activities of this committee.

REVOLVING FUND

1. Mr. MYERS. You state that the total income into the fund in fiscal year 1994 was $109,707,000. What were your expenditures in fiscal year 1994?

General GENEGA. For fiscal year 1994, we estimated obligations of $85,000,000, and actually obligated $77,573,000. Our expenditures for capital acquisitions were $37,668,000.

2. Mr. MYERS. You estimate that new obligations in fiscal year 1996 will be $93,000,000. Please provide a detailed breakdown of that figure.

General GENEGA. The $93,000,000 of obligation authority requested for fiscal year 1996 consists of $692,000 for construction of an Analytical Laboratory and $2,700,000 Additions and Betterments to Building 8000 at the Waterways Experiment Station; $434,000 for Additions and Betterments to the Rock Island District Headquarters Building; $10,000,000 for Above Standard Requirements in the New Corps of Engineers Headquarters Building; $110,000 for renovation of the South Pacific Division Laboratory; $7,465,000 for rehabilitation of the dredge McFARLAND and $200,000 for replacement survey boats in the North Atlantic Division; $6,500,000 for a gatelifter crane and $100,000 for a towboat in the Ohio River Division; $465,000 for a crane barge, $500,000 for a fuel oil barge, $1,380,000 for a spud barge and $10,000 for a patrol boat in the Lower Mississippi Valley Division; $100,000 for a towboat in the South Atlantic Division; $230,000 for a towboat in the Southwestern Division and $3,000,000 for systems furniture in the Los Angeles District. In addition, the obligation authority requested for Corps-wide equipment acquisitions includes $450,000 for video teleconferencing; $2,000,000 for global positioning systems; $6,022,000 for development and deployment of the Corps of Engineers Financial Management Plan; $2,000,000 for upgrading communications; $1,000,000 for water control data systems, $3,000,000 for computer aided design and drafting equipment; $2,000,000 for Corps of Engineer Automation Plan equipment and $5,000,000 for recurring automatic data processing equipment. The remaining $37,642,000 of fiscal year 1996 obligation authority is being requested for acquisition of a variety of non-specific floating plant, land based plant, small tools, miscellaneous office equipment.

3. Mr. MYERS. Is the new analytical laboratory facility you propose to construct at the Waterways Experiment Station needed to support the Corps' Civil Works mission or will it be used primarily in support of Department of Defense activities?

General GENEGA. The facility is needed to develop analytical techniques to ensure compliance of all civil works projects with Resource Conservation and Recovery Act (RCRA), Clean Water Act (CWA), Safe Drinking Water Act, and the Clean Air Act. This facility will support all Civil Works environmental research programs including wetlands, dredging of contaminated sediments, water quality, and natural resources. It also provides essential quality assurance/quality control for all Corps' District Offices.

Mr. MYERS. Why is there a need for a facility capable of handling radioactive materials?

General GENEGA. WES conducts environmental quality R&D studies which require radio-labelled isotopes to characterize and track environmental transport and fate and effect of contaminants. A facility that is properly designed for safe handling and analysis of these radioactive materials is essential.

Mr. MYERS. You state that few commercial facilities exist that are capable of performing research and analysis of dioxin, radiation and other hazardous and toxic materials. The Department of Energy has underway a multibillion dollar environmental restoration and waste cleanup effort. What facilities does it use for research and analysis of hazardous materials?

General GENEGA. The DOE uses a variety of commercial laboratories for analysis of hazardous and radioactive materials.

Mr. MYERS. Why couldn't the Corps use those facilities?

General GENEGA. The demand for these analyses is much greater than commercial capabilities. A dedicated facility is needed to provide analytical data to monitor continuous progress of time-dependent research. The schedule of sample analyses must match that of the R&D. No one laboratory is capable of executing all of the different analyses required to support the Corps' Environmental Quality research and development programs.

Mr. MYERS. What will happen to the existing laboratory after completion of the new one?

General GENEGA. Plans are to conduct environmental analytical research studies in the laboratory space vacated by the Analytical Chemistry Laboratory. This will eliminate use of substandard temporary trailers and portable buildings now being used for these projects.

Mr. MYERS. The General Expenses justification sheets state that costs related to the new headquarters building will be $55,765,000 with $35,925,000 to be funded from PRIP. However, the Revolving Fund justification sheets indicate a total cost of $20,000,000. What is correct, $35,952,000 or $20,000,000?

General GENEGA. Our estimate of the PRIP requirement remains $20,000,000, our original estimate. The $35,952,000 which was included in our General Expenses justification as the PRIP requirement represents a high-end estimate, for planning purposes. We have begun to refine this estimate, as design of the building proceeds, by eliminating all but essential items, by distinguishing capital costs from costs which should be expensed, and by working toward final agreements with the General Services Administration (GSA) regarding what features are standard and what features the Corps will have to finance. I can assure you that the Corps will make every effort to keep PRIP costs within the original $20,000,000 estimate.

Mr. MYERS. You also indicate that this work is underway. Construction of the new building hasn't started yet has it?

General GENEGA. GSA exercised their contract option for design of the Corps facility in August 1994. Preliminary design work is currently underway.

Mr. MYERS. What is the current schedule for construction of the building?

General GENEGA. The current schedule calls for the construction contract to be advertised by GSA in February 1997. The construction should be complete by December 1998.

Mr. Myers. Why are you proposing to spend $8,000,000 to rehabilitate the dredge McFARLAND if the possibility exists that it will not be retained as part of the minimum fleet?

General GENEGA. The McFARLAND is equipped with 28 year old technology. The proposed rehabilitation will incorporate current electronic technology and other efficiency measures into the McFARLAND's system. This will allow the Corps to be responsive and dredge more efficiently and economically. While a future study may indicate that industry dredges can adequately accomplish the work of the McFARLAND and reopen the question of the continued requirement for it in the minimum fleet, the legislation establishing the Corps minimum fleet requires the Corps to maintain it to technologically modern and efficient standards.

Mr. MYERS. Are crane barges currently available in the private sector to do the work that would be performed by the new gate lifter crane you propose to purchase for use on the Ohio River system?

General GENEGA. There are no crane barges available in the Ohio River system to perform this work.

Mr. MYERS. Why is it necessary that each lock have a spare set of miter gates?

Major General GENEGA. Each lock has a spare set of miter gates due to design considerations. Because of the differences in sizes and detailed design, it is not practical to use spare gates which have to be re-configured for where they will be used.

Mr. MYERS. What will it cost to purchase those spare gates?

Major General GENEGA. The cost of spare gates is approximately $1,000,000 per leaf or approximately $2,000,000 per set.

Mr MYERS. Where are those funds budgeted and what is the status of that effort?

General GENEGA. No funds have been budgeted to date. Operation and Maintenance, General would be the appropriation through which we would seek to equip about one lock each year with spare gate leaves, focusing on our older projects first. It would require several years to complete the system. Our first submission for spare gates will be included in the fiscal year 1997 budget request.

Mr. MYERS. There are a number of lock replacement projects underway and being planned in the Ohio River Division. Are spare gates being purchased for existing lock chambers even if those locks are scheduled for replacement in the next few years?

General GENEGA. No. They are not being purchased.

Mr. MYERS. How many accidents have there been in the last 10 years in the Ohio River system that have required complete replacement of gate leaves?

General GENEGA. None. However that the economic justification for the gate lifter is based on reducing lock closure time during scheduled maintenance activities. Also, we have had many close calls, and a reasonable assumption would be that a gate will someday be lost in a catastrophic scenario. There is history throughout the Corps to support this assumption.

Mr. MYERS. Do locks on the Mississippi River system have spare lock gates?

General GENEGA. Yes. Locks on the Mississippi River system do have spare lock gates.

Mr. MYERS. If the Crane Barge No. 1 Replacement for the St. Louis District is a new item, why is construction starting in fiscal year 1995?

General GENEGA. The justification sheet which indicates construction of Crane Barge No. 1 starting in fiscal year 1995 is in error. Construction of this vessel will not begin until after the receipt of Congressional authorization. The $80,000 scheduled in fiscal year 1995 is to initiate design. In fiscal year 1996, we are requesting approval for $465,000 to complete design and initiate construction.

Mr. MYERS. Is private sector equipment available to accomplish this work?

General GENEGA. Yes. There are crane barges in the private sector capable of accomplishing the work. However, the crane barge requirement is based on daily usage to accomplish a variety of miscellaneous tasks such as placing riprap stone, replacing heavy machinery, assisting in miter gate changes, repair work at the service base and drift removal. Under these conditions, renting or leasing a crane barge is not cost effective.

Mr. Myers. Will the video teleconferencing program provide for facilities at every Corps Division and District office?

General GENEGA: No. Some activities will continue to utilize other government or private teleconferencing facilities where available and cost effective to do so. In addition, some activities may determine, in accordance with Corps guidance requiring each activity to cost justify their acquisition based on projected savings in travel or other costs, that they cannot cost effectively utilize a video teleconferencing facility. With these two exceptions, the video teleconferencing program provides for facilities at every Corps Division and District office.

Mr. Myers: When will you see evidence in savings in travel costs?

General GENEGA: The Corps estimates that $1.7 million was saved in FY 94 in travel and related costs through the use of video teleconferencing. In addition we estimate, on an individual site basis, that the saving begin within 24 months of initial installation. The specific investment matrix will vary greatly from site to site. However, projected travel expenses between Districts, Divisions, Headquarters and Federal/State agencies (communications/meetings between sites with existing video teleconferencing capability) are targeted for potential savings in travel costs.

TECHNOLOGY TRANSFER

Mr. MYERS. What is the status of the construction technology transfer project between the Corps of Engineers and Indiana State University.

General Genega. The Construction Technology Transfer project is a cooperative research and development effort between the Corps' Construction Engineering Research Laboratory (CERL) and Indiana State University's (ISU) School of Technology. The goals of this joint effort are to (1) assess the currently employed technologies and management tools used by small and medium sized construction companies, (2) provide them technology transfer support for Corps developed technology, and (3) enhance their competitiveness . This project will serve as a model for technology transfer than can be replicated at other regional technical institutions. The project is being conducted in three phases.

Phase 1 required a survey of small- and medium- sized construction firms in the region to determine their needs in terms of levels and types of automation, management and other technologies that are in use. The survey has been conducted by ISU via contract and the results are currently being analyzed.

Phase 2 involves the development of technology transfer activities based on the survey results and an analysis of Corps technologies. An introductory course in enabling technologies in construction has been developed at ISU. Further work including transformation of specific Corps technologies for dual-use will be accomplished.

Phase 3 consists of delivering technology transfer programs to ISU to be made available to contractors. ISU will monitor their levels of adoption, and modify the procedures and transfer activities. The infrastructure necessary to deliver the programs has already been created at ISU and named the "Construction Technology Transfer Center (CTTC)." Specific technology transfer programs identified in Phase 1 will be implemented . The CTTC should begin operation by September1995.

Mr. MYERS. How was the 1994 funding utilized and how will the 1995 appropriation be spent?

General GENEGA. Approximately 60% of the FY 1994 funds provided for the Construction Technology Transfer Program supported an Interagency Personnel Agreement (IPA) for Dr. Dallman, ISU, Co-Principal Investigator, and other ISU short form research contractors. Approximately 10% provided for a Survey of Needs Assessment which was required under Phase 1. The balance supported CERL in-house labor. FY 1995 funds will continue to support the ISU IPA and SFRC's and the initiation of the CTTC.

CONTINUING AUTHORITIES PROGRAMS

Mr. MYERS. Your budget request assumes the termination of continuing authority programs in 1997. Are you proposing to deauthorize these programs?

General GENEGA. Yes, a legislative proposal to that effect is being developed.

Mr. MYERS. Your testimony indicates that any continuing authority program which has been approved for construction by the end of FY96 will continue to completion and be funded out of 1996 and prior year funds. How can you determine at this time that you will have adequate carryover funds to continue these projects to completion?

General GENEGA. The actual funding needs will of course depend on how many of the studies now underway result in favorable recommendations and the costs of the projects recommended. We have looked at requirements for upcoming projects where costs are known, funding needs for past years and probable success rates of studies underway in estimating our needs.

Mr. MYERS. What is the rationale for proposing termination of these programs?

General GENEGA. Although the programs have implemented many hundreds of projects nationwide that are highly valued by their beneficiaries, we cannot describe then as nationally significant. We believe that the problems addressed are of a scope more appropriately addressed at the local level.

Mr. MYERS. Would you clarify whether a continuing authorities project has to be approved for construction or under construction by the end of FY96 to be completed?

General GENEGA. The project has to be approved for construction, but not necessarily under construction. We treat the approval as the new start date, since the local sponsor must meet their requirements such as acquisition of land, easements, rights of way and relocations prior to actual award of a construction contract.

Mr. MYERS. Will you make any FY97 request for funds to complete any continuing authorities projects?

General GENEGA. We believe that we can, with funds carried over in the continuing authorities programs, and with reprogramming authority from funds carried over in other Construction, General accounts, meet the funding needs after fiscal year 1996 without budget requests.

QUESTIONS SUBMITTED FOR THE RECORD BY MR. ROGERS

CONTINUING AUTHORITIES PROGRAMS

SECTION 205

Question. The Administration also proposed phasing out the section 205 , or small flood control program. as part of it's budget proposal. Although this program has its share of problems, it is regarded as being one of the better authorities for the Corps. If something works relatively well, why abolish it?

Answer. Although the program has implemented many hundreds of projects nationwide that are highly valued by their beneficiaries, we cannot describe then as nationally significant. We believe that the problems addressed are of a scope more appropriately addressed at the local level. Therefore, FY 1996 will be the last year of budgeting for the program.

Question. What will happen to current Section 205 projects which are in the feasibility study phase if this policy is enacted?

Answer. Feasibility studies now underway will be completed. Projects will move on to the next phase only if scheduled to reach construction approval during fiscal year 1996.

SECTION 14

Question. Why did the Section 14 program, which protects roads and other infrastructure from erosion, run out of money last year? What is the Corps doing this year to avoid this problem? Why did the Administration propose to end this program?

Answer. The Section 14 program has sufficient dollars in fiscal year 1995, but the legislative authority imposes an annual allocation limit of $12,500,000. We had to limit new phases and defer some design in the Section 14 program in fiscal year 1995 so that our commitments to fund approved construction and ongoing design did not exceed the legislative limit. Without a change in the authorizing legislation we cannot issue more than $12,500,000 in any one year regardless of the amount appropriated. We do not anticipate a problem in fiscal year 1996 due to the constraints on new design in fiscal year 1995. The reason for the proposal to end the program is the same as for the other Continuing Authorities. We cannot describe then as nationally significant. We believe that the problems addressed are of a scope more appropriately addressed at the local level.

QUESTIONS SUBMITTED BY MR. ROGERS

SECTION 313 AND 340

Question. The Section 313 and 340 programs are of interest to me. Would you please summarize the programs and discuss the projects being funded or constructed under these sections. How have the pilot projects been received in these communities?

Answer. Sections 313 and 340 of the Water Resources Development Act of 1992 established two regional pilot programs in southcentral Pennsylvania and southern West Virginia for providing design and construction assistance for water related environmental infrastructure. The Federal funding limits for the Section 313 and 340 programs were authorized at $17.0 million and $7.0 million, respectively. Congress provided funding for these programs in fiscal year 1994 and 1995, totaling $17.0 million for the Section 313 program and $7.0 million for the Section 340 program. Design assistance is currently underway for construction of water system improvements in the city of Altoona, Pennsylvania and a wastewater collection and treatment systems for the Forest Hills Municipal Authority, Cambria County, Pennsylvania. Under the Section 340 program, the Corps will provide construction assistance to the town of Gilbert, Mingo County, West Virginia for a wastewater collection system and treatment plant facility. An agreement for design assistance for a water distribution system in Mercer County, West Virginia is currently being finalized. The Corps has also been developing comprehensive general management plans of implementing other environmental infrastructure improvements in both regions. In accordance with the authorizing legislation, the Corps will submit a final report on Section 313 and 340 pilot programs to the Congress before December 31, 1998.

Design and construction agreements between non-Federal sponsors and the Corps have been executed to provide specified items of local cooperation and cost share the projects at 75 percent Federal and 25 percent non-Federal.

QUESTIONS SUBMITTED BY MR. FAZIO

REGULATORY PROGRAM

Question. Would you please give me a thumbnail sketch of the goals and objectives of the Corps "nationwide permit program"?

Answer. The purpose of the nationwide permit program is to authorize, with minimal review procedures, the literally thousands of minor activities which have little, if any environmental impacts. An activity which can qualify under one of the Corps 36 nationwide permits is not subject to the more extensive, time-consuming reviews associated with larger or more environmentally damaging projects. Nationwide permits are issued by our headquarters office for either specific activities throughout the country or for all activities occurring in certain waters throughout the country, provided they have minimal impacts individually and cumulatively. Nationwide permits are proposed, modified, issued and revoked in a five-year review cycle that includes public comment.

QUESTIONS FOR THE RECORD FROM MR. FAZIO

REGULATORY PROGRAM

Question. Is it the Corps policy to have a blanket prohibition on issuance of nationwide permits if a threatened or endangered species may be present?

Answer. Generally, no. Corps division offices may revoke authorizations by nationwide permits for geographic areas, such as vernal pools, to protect aquatic resources or public interest factors. However, activities in these areas could be permitted; an activity might still qualify for authorization under a regional or individual permit. Nationwide permits are conditioned to protect endangered species. If the endangered species requirements are satisfied, then the nationwide permit may be used without the need to obtain an individual permit. Nationwide permit coverage in the Central Valley has not been revoked by the Division. Where vernal pools are involved, a section 7 consultation for endangered species is required, to insure the species is not affected or is adequately protected, before nationwide permit authorization can be obtained.

Question. If this is the Corps policy, will you ever be able to issue another nationwide permit in the Central Valley of California, given the possibility that the fairy shrimp may be found in wetland and vernal pool habitat?

Answer. Yes. As long as endangered species requirements are satisfied, we can issue a nationwide permit.

QUESTIONS FOR THE RECORD FROM MR. FAZIO

REGULATORY PROGRAM

Question. If this is the Corps policy, by what authority have you eliminated the nationwide permit process as an option available to the Corps under the Clean Water Act?

Answer. By our regulations, set forth in the Code of Federal Regulations, Part 330, Division Engineers may revoke nationwide permit authorizations in geographic areas where cumulative impacts are more than minimal or other public interest factors are involved. Our use of nationwide and regional general permits, which continues to expand, has generally been very successful. We estimate that each year over 80,000 activities are authorized by general permits. We do not consider their use, as a streamlined mechanism for approving projects, to be threatened.

QUESTIONS FOR THE RECORD FROM MR. FAZIO

REGULATORY PROGRAM

Question. How can you in the Corps D.C. office send a message to the district and division offices that the initial permitting decision remains with the Corps?

Answer. Our basic policy on this matter, that the Corps is the decision-maker, was issued in a guidance letter to our districts in 1992 and we continue to stress this policy at every opportunity. The President's Wetlands Plan also reinforces this policy for all agencies.

Question. Similarly, is there any way to prevent the threat of lawsuits from paralyzing the Corps permitting process?

Answer. Up to now, the number of lawsuits has not been large enough to seriously impede the Corp permit process. Of course, lawsuits because of alleged "takings" have been getting much attention and have the potential to add to our litigation workload. It is hard to judge how much the threat of lawsuits affects the regulatory program, but it is something that we cannot ignore. A major objective in adding an administrative appeals process to the program is to greatly reduce the need for expensive and time-consuming litigation. The public will be able to challenge permit decisions without having to enter the court system.

QUESTIONS SUBMITTED BY MR. RIGGS

AUTHORITY TO WAIVE COST SHARING FOR FLOOD CONTROL PROJECTS

Mr. RIGGS. Does the Corps of Engineers have any authority to modify or waive the 25 percent local match for a flood control project? What is the authority? Please provide examples of when it has been exercised.

General GENEGA. Section 103 of the Water Resources Development Act of 1986 (WRDA 96), establishes a minimum non-Federal sponsor contribution of 25 percent of flood control costs. However, subsection 103(m) of WRDA 86 requires cost sharing agreements for flood control to be subject to the ability of a non-Federal interest to pay, as determined by procedures developed by the Secretary of the Army. These procedures were established with publication of a final rule in the Federal Register (54 FR 40578), October 2, 1989, and the publication of an amended rule in the Federal Register (60 FR 5133), January 26, 1995. These procedures establish an "ability to pay" test which must be applied to all flood control projects. As a result of the application of the test some projects will be cost shared by non-Federal interests at a lower level than the standard non-Federal share that would be required under the provisions of subsections 103(a) and 103(b) of WRDA 86. During the past year the non-Federal sponsors of the projects for Perry Creek, IA, Pike County, KY, and Williamsburg, KY, have benefitted from application of the "ability to pay" rule.

Additionally, the Corps has authority under Section 1156 of WRDA 86 to waive cost sharing requirements up to $200,000 for all studies and projects in American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands, and the Trust Territory of the Pacific Islands.

QUESTIONS SUBMITTED BY MR. RIGGS

REGULATORY PROGRAM

Question. Louisiana Pacific made application to the Corps of Engineers 8 months ago for reconstruction of their Samoa Dock. These improvements are extremely important to the future of Humboldt Bay and Louisiana Pacific. There has been no opposition to the Project and all other agencies have issued their permits. What is the status of the application?

Answer. The Corps plans to issue a public notice for this project by mid-March. Final decision on the application should occur later this Spring, assuming there are no major problems. The major issue is impacts on saltmarsh and eelgrass. One reason why the project has been delayed has been due to problems in obtaining state approvals; the state issued a conditional coastal zone approval this past February and final approval of state water quality certification is still pending.

Question. I have been told that the Corps of Engineers will soon announce a policy (reportedly scheduled to be announced in Viansa on March 1 or 2) that would allow the permits necessary to maintain levees in Sonoma, California and Petaluma Valley. Under the policy, as explained to me, farmers must agree to "mitigate" the "damage" they will do to their levees by purchasing 70 acres for the US Government at some time in the future. The form required apparently does not itemize the price of the land, when it needs to be purchased, nor where it is located. Please describe this policy in full for the record, addressing these concerns.

Answer. Our San Francisco District hopes to issue a general permit that will allow levee work by farmers and the California Fish and Game Department in Sonoma and Petaluma Valleys. Two endangered species are at issue, the clapper rail and the saltmarsh harvest mouse, so there will likely have to be some mitigation to compensate for the impacts on these two species. The Corps is not setting any new policy and the San Francisco District is not requiring the purchase of 70 acres for mitigation. The 70-acre figure has been proposed by the U.S. Fish and Wildlife Service. The Corps is more concerned with habitat value than with acreage. The Corps is working with the farmers and Congresswoman Woolsey, who represents the Sonoma and Petaluma areas, to resolve the mitigation issue. The State Fish and Game Commission will be designing the mitigation and we expect resolution of the mitigation issue this Spring.

QUESTIONS FOR THE RECORD FROM MR. RIGGS

Mr. RIGGS: In a letter of February 24, 1995, David Schneider,Principal of Pacific Affiliates Consulting Engineers of Eureka, California, expressed concern to me regarding the Corps of Engineers use of consultants. A copy of the correspondence is attached.As you can see, Mr. Schneider believes that methods being utilized by the Corps are not cost advantageous. I would appreciate your addressing for the record the issues raised.

General GENEGA: Mr. Schneider feels that we should have a separate contract in the Humbolt Bay area where his firm would be competitive. However, we do not have enough work in this area to justify the additional administrative cost of procuring and maintaining a separate contract.

Mr. RIGGS: Mr. Schneider's letter also references "procedural errors by the Corps of Engineers" that result in two contracts not being awarded to his firm. If true, I would appreciate and explanation of the circumstances for the record.

General GENEGA: Mr. Schneider's firm, Pacific Affiliates, was not successful in two recent procurements for different reasons. Pacific Affiliates in joint venture with G.B. Star was selected as best qualified for a contract in late 1992, that had been set aside for small businesses. However, another firm protested that G.B Star was not a small business. The Small Business Administration confirmed that G.B. Star was not a small business, which prevented award of a contract to the Pacific Affiliates/G.B. Star joint venture. The second contract was initially solicited on 25 October 1993 (Solicitation No. DACW07-94-R-0002). Pacific Affiliates/G.B. Star was selected and negotiations were conducted. However, final legal review revealed that the solicitation had not properly stated the order of importance of the selection criteria and our remedy was to resolicit. The contract was resolicited on 12 July 1994 (Solicitation No. DACW07-94-R-0009). Pacific Affiliates/G.B. Star was ranked second because they had recently received other Corps work. The award of this contract has been delayed by a protest from another firm.

Riggs 2

PACIFIC AFFILIATES
A CONSULTING ENGINEERING GROUP
835 THIRD STREET • EUREKA • CALIFORNIA • 95501 • (707) 445-3001

DAVID L. SCHNEIDER - RCE 27286

February 24, 1995

Honorable Congressman Frank Riggs
First Congressional District, California
710 E. Street, Suite 100
Eureka, CA 95501

Dear Congressman Riggs:

Pacific Affiliates is a consulting engineering group that specializes in marine engineering and hydrographic surveys We do work from Fort Bragg to the Oregon border (we have done work in San Francisco but find it difficult to compete due to our location).

Pacific Affiliates maintains several survey boats and in 1986 designed and had constructed a twin engine aluminum survey vessel to Corps of Engineers Specifications for Class 1 Surveys. During the past ten years we have spent over $200,000 on hydrographic survey equipment to maintain our classification. Our people are very experienced and have always received an excellent rating from the Corps of Engineers (see attached).

From a work standpoint the North Coast has very little private hydrographic survey work and only a few public works projects. The bulk of the work is Corps of Engineers since the federal government maintains the shipping channels and monitors their depths.

During the past sixteen years we have been selected as the Corps of Engineers AE Contractor (as joint venture) three times. During the past four years we were selected twice but due to procedural errors by the Corps of Engineers the contract was not awarded to us.

The main reason for my appealing for your help is economics, both the government's and my own. We are located in a depressed area trying to support a highly technical business with a limited amount of work. It upsets us to see firms being subsidized by the government to come into our area and do work we need to survive. The following points are made on economics.

1. Pacific Affiliates charge out rates have historically been lower than out of the area consultants (union area vs. non union area). Even when we were a joint venture our San Francisco counterpart was allowed to charge higher rates than we were for the same work. We do not think the government should be subsidizing Bay Area consultants to come to our area to do work we could do cheaper.

2. The cost of mobilizing and demobilizing men and equipment (boats, trucks, automatic tide readers, etc.) to Humboldt County for each survey is several thousand dollars. Pacific Affiliates is here and has minimal costs.

3. Stand by time when weather does not allow you to do ocean surveys is paid by the government and during the winter that could be a lengthy and expensive proposition Pacific Affiliates does not have stand by since we can work on our other projects. Pacific Affilietes has completed surveys which out of town consultants could not complete due to weather or the quality of the survey was poor due to weather.

4. Per diem is paid by the government for all out of town consultants. This is for work or non work time. We do not receive per diem for local work.

5. Survey turn-around time is quicker for a local consultant. Out of the area consultants typically wait until they get back to their main office to reduce and plot data thus eliminating any chances of field checking any irregularities.

6. Local consultants have better knowledge of local conditions. One out of the area survey boat was capsized at the entrance to Humboldt Bay due to lack of familiarization.

Pacific Affiliates and other local consultants do not mind competing for work on Humboldt Bay We have on several occasions asked that an AE Contract be solicited for the area north of Point Mendocino. This would give us a fair chance to compete for work and save the government a considerable amount of money.

It is difficult for a firm remote to the San Francisco District office to solicit contracts and Bay Area firms have a lobbying advantage. Humboldt Bay is in an area of high unemployment and we would like to keep our people employed. The local work is only about 5% of the District's AE work but it is important to our survival.

Any help you could give us in reviewing this problem would be greatly appreciated by myself and my employees.

Sincerely yours,

David Schneider
Principal

DLS/jw
Attachment
cc: File Copy

P S. We can provide letters of support for our concerns from local governments should you desire them.

P. 4

RECEIVED AUG 17 1992

DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS
630 Sansome Street, Room 720
San Francisco, California 94111-2206

REPLY TO
ATTENTION OF:

Office of the Division Engineer

12 AUG 1992

Pacific Affiliates
835 Third Street
Eureka, California 95501

Gentlemen:

It is my pleasure to inform you that your recent work under an indefinite delivery order contract for surveying services (contract no. DACW07-91-D-0001) for the Corps of Engineers, San Francisco District has been rated "Excellent". Your responsiveness to our needs and consistently high quality products provided the Corps with reliable sources of professional survey services and data.

We appreciate your dedicated efforts and look forward to working with your firm in the future.

Sincerely,

Roger F. Yankoupe
Brigadier General, U.S. Army
Division Engineer

P. 5

PACIFIC AFFILIATES
A CONSULTING ENGINEERING GROUP
835 THIRD STREET • EUREKA • CALIFORNIA • 95501 • (707) 445-3001

DAVID L. SCHNEIDER • RCE 27285

September 14, 1994

Lieutenant Colonel Michael J. Walsh
Commander and District Engineer
San Francisco District
U.S. Army Corps of Engineers
211 Main Street, Rom. 906
San Francisco, CA 94105-1905

Re: Indefinite Delivery Order Contract for Professional Surveys Construction and Planning Projects located within the San Francisco District
SOL DACW07-94-R-0002 (First Contract)
SOL DACW07-94-R-0009 (Second Contract)

Dear Lt. Colonel Walsh:

Pacific Affiliates/G.B. Star was selected through the AE process as Consultant for Solicitation No. DACW07-94-R-0002 as referenced above (First Contract). After going through the lengthy selection process, General Accounting Office audit and rate negotiations the Contract was to be signed by the Contracting Officer. Prior to signature the Legal Department found that improper forms had been used in the pre-selection process (as explained to us) and that a new solicitation would have to be conducted. We were assured that there was nothing wrong with our selection and that it was only a procedural error.

The Contract was re-advertised (Second Contract) and we were again selected for an interview. The interview process was the same as in the first solicitation. It was our expectation that since there was only a short time between the solicitations and that the same firms were interviewed that we would once again be selected and the procedural error would be corrected. This was not the case however and an Oregon firm had developed enough experience in that short time to be selected over us. This hints at some improprieties in the selection process where an out of state firm with no equipment in the State is selected as the prime contractor.

Pacific Affiliates is a small firm that relies heavily on Army Corps of Engineers work. This is the third time in three years that we have lost work after being selected due to circumstances beyond our control. We have been assured that our work performance is excellent and have even received letters of commendation from the Army Corps of Engineers.

R-38

Lieutenant Colonel Michael J. Walsh
Commander and District Engineer
San Francisco District
U.S. Army Corps of Engineers
September 14, 1994
Page Two

Humboldt County like the rest of California is experiencing poor economic times and our area has been especially hard hit due to the timber woes. We have for the past ten years made submittals to the Portland District but have not even been selected for an interview. This is upsetting especially since an Oregon consultant is allowed easy access to the California District. It is difficult for us to maintain expensive survey equipment as required by the Corps while out of State consultants travel to our area to work. They often have to stay in hotels at government expense until weather permits the surveys to be completed.

I respectfully request your review of these circumstances and would appreciate meeting with you on the matter.

Sincerely yours,

David L. Schneider

David L. Schneider
RCE 27285

DLS/jw
cc: Senator Dianne Feinstein, U.S. Senate, Washington, DC
Senator Barbara Boxer, U.S. Senate, Washington, DC
Congressman Dan Hamburg, House of Representatives, Washington, DC
Governor Pete Wilson, State of California, Sacramento, CA
John Nelson, G.B. Star, Novato, CA
Michael McEnespy, G.B. Star, Chico, CA
Tom Becker, Harland Law Firm
File AE/Corp/255

DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS
630 Sansome Street, Room 720
San Francisco, California 94111-2206

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ATTENTION OF:

RECEIVED AUG 17 1992

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We appreciate your dedicated efforts and look forward to working with your firm in the future.

Sincerely,

Roger F. Yankoupe
Brigadier General, U.S. Army
Division Engineer

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P. 02

Sea Surveyor, Inc.

Precision Marine Surveying
for the Engineering Community

021 East 2nd Street, Suite 201
Benicia, CA 94510
(707) 746-1053
Fax: (707) 746-0181

9 September 1994

US Army Corps of Engineers, San Francisco District
211 Main Street, Suite 906
San Francisco, CA 94105-1905

ATTENTION: Lieutenant Colonel Leonard E. Cardoza

SUBJECT: Solicitation No. DACW07-94-R-0009, Indefinite Delivery Order Contract for Surveys Located Within the San Francisco District Corps of Engineers Boundaries

Dear Sir:

The purpose of this letter is to respectfully contest the award of the subject contract to **David Evans & Associates** (DE&A). DE&A is an engineering firm based in Oregon. They have had survey contracts with the Portland District nearly continuously for the past 6-years. Although they have a small, local (non-survey oriented) office, they do not have survey equipment or vessels based in California, nor do they have hydrographic surveyors residing in California. Significantly, DE&A has minimal experience at surveying within the boundaries of the San Francisco District.

The announcement for the subject contract was published in the 12 July 1994 issue of the *Commerce Business Daily*. The announcement outlined the criteria to be evaluated by the Corps in selecting the survey contractor, including:

> *Firms must meet the following technical requirements: ....(7) shall be located within the San Francisco District Corps of Engineers jurisdictional boundaries which include San Francisco north to the Oregon border and south to San Luis Obispo.*

We believe that awarding the subject contract to a company with no California-based survey personnel and equipment is a disservice to the local survey industry and to the San Francisco District's desire for quick response from their survey contractor. There are presently at least four (4) qualified hydrographic survey firms in the Bay Area that have the local personnel, equipment, and experience necessary to perform the subject contract. The closing of Navy bases in the San Francisco Bay area has had a significant impact on California's economy, and the Corps of Engineers is the only remaining major source of work for Bay Area survey companys. We believe that the award of a 2-year, $1.5 million contract to an out-of-state company represents a blow to the local survey industry and will have a significant impact on our industry's ability to maintain state-of-the-art survey equipment and experienced personnel in the Bay Area.

Sea Surveyor, Inc. is a small, Woman-Business Enterprise that specializes in performing hydrographic (bathymetric) surveys in San Francisco Bay. Founded in 1985, Sea Surveyor worked exclusively in San Francisco Bay for 7 years prior to being awarded our first Corps contract in 1992. We were pleased that our first work order under our contract with the San Francisco District received the 1994 **ENGINEERING EXCELLENCE** award from *CEI.SOC*

Based on encouragement from the Corps, Sea Surveyor has spent considerable corporate resources on Differential GPS navigation and developing "real-time data processing" that meets the Corps' stated desire for instantaneous charts of the seafloor that can be transmitted directly to the Corps office from our survey boats via cellular modem. We are concerned that our efforts to satisfy the requirements of the San Francisco District have been ignored in favor of an Oregon-based firm, especially considering the Portland District's repeated refusal to contract with California survey firms.

I look forward to the opportunity to meet with you, and other interested parties, to resolve this issue.

Sincerely,

Kelley Vickers

Ms. Kelley Vickers
President

attachments

cc: Senator Dianne Feinstein, US Senate, Washington, DC
Senator Barbara Boxer, US Senate, Washington, DC
Congressman George Miller, House of Representatives, Washington, DC
Congressman Michael Huffington, House of Representatives, Washington DC
Governor Pete Wilson, State of California, Sacramento, CA
Treasurer Kathleen Brown, State of California, Sacramento, CA

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PACIFIC AFFILIATES
A CONSULTING ENGINEERING GROUP
836 THIRD STREET • EUREKA • CALIFORNIA • 95501 • (707) 445-3001

DAVID L. SCHNEIDER • CE 27288

July 1, 1986

Congressman Dougles Boscoe
408 Cannon House Office Building
Washington, D.C. 20515

Dear Mr. Boscoe:

Pacific Affiliates is a Consulting Engineering Group that specializes in marine engineering. During the past six years we have subcontracted through the bid process before and after dredge surveys on maintenance dredging projects in our area. Since our office is in Eureka we can be very competitive in bidding on local projects. Competing firms from out of our area have to contend with travel expenses, higher labor cost, stand-by time due to unfavorable seas, and equipment mobilization cost. For example, should seas become too rough to survey on we can go to other projects whereas a Bay Area firm has to stand by (at considerable cost) and wait for the conditions to change.

During the past year the U.S. Army Corps of Engineers has been eliminating the subcontracted surveyor on their dredging contracts to allow for their AE Surveyor to do the work. The AE Contract is a negotiated contract that is reviewed every three years and historically has been a Bay Area firm. Our firm has applied for the AE Contract and, although we have performed all the work typical of the contract, have never been selected for an interview.

From an economic standpoint it would appear logical that the government should allow private licensed surveyors to continue to bid subcontracts to dredging contracts. Clauses could be installed in the dredging contracts to allow and assure direct payment to the subcontractor if their payment appears a problem.

It is realized that AE Contracts are a necessity for performing Corps of Engineers field work but this work should be directed to the labor market in which the work is to take place. If an AE Contract is negotiated for each area (since there are two consecutive AE Contracts per district) it will result in considerable cost savings to the government.

Douglas Boscoe
July 1, 1986

Pacific Affiliates has made some major capital expenditures on equipment to do work in marine engineering and bathymetric surveys. Since Corps of Engineers subcontracts are our primary source of income their change in policy has forced us to lay off personnel in an already economically depressed area. In the long run it could effectively force us out of business.

We would appreciate any consideration you could give us in dealing with this problem. It is only asked that we be given equal consideration for work in our area and that economics be a consideration in the selection of a surveyor.

Sincerely yours,

David Schneider
Principal

DS/jc

cc: Senator Cranston
Senator Wilson

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PACIFIC AFFILIATES
A CONSULTING ENGINEERING GROUP
835 THIRD STREET • EUREKA • CALIFORNIA • 95501 • (707) 445-3001

DAVID L. SCHNEIDER • CE 27288

OFFICE COPY

May 6, 1983

Archie Hays
U.S. Army Corps of Engineers
211 Main Street
San Francisco, CA 94105

Dear Mr. Hays,

As per our discussion enclosed is a copy of our firm's 254 Form. This will update the one mailed to your office on June 28, 1982.

I would also like to take this opportunity to request consideration for an open ended AE contract. Pacific Affiliates or its principals have provided consulting services to the Corps of Engineers over the past several years. We have done extensive hydrographic surveying in and around the Bay for the Corps and other public and private entities. With the amount of work scheduled for this area in the near future an open ended contract could prove beneficial. Our crews could be available immediately for any emergency or other work needed to support Corps of Engineers projects. Cost savings in using a local consultant could also be realized in very little travel expense, lost time due to road conditions and bad weather, per diem expenses and the fact that our crews work in a non union area.

Our experience is as shown on the 254 form. Should you wish further information or desire a 255 Form for a specific project please contact me.

Thank you for your consideration on this matter.

Sincerely Yours,

David Schneider

David Schneider
Principal
cc: Jack McKellar
    Jack Farless

enclosure

DS/aw

SURVEYS • PLANNING • DESIGN • CONSTRUCTION SUPERVISION

CLOSING

General GENEGA. Thank you, sir.

Mr. MYERS. We look forward to working together, even though you will not be appearing everyday, you may be hearing from us and we may be hearing from you.

Thank you very much for the job that you are doing. Thank you for your testimony this morning.

The committee will stand adjourned until 2:00 o'clock this afternoon.

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